ATTACHMENT C

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET ATLANTA, GEORGIA 30303-8960

AUTHENTICATION

I, Bryan Myers, attest that I am employed by the Environmental Protection Agency as the Chief of the Drinking Water Enforcement Branch (DWEB) of the Enforcement and Compliance Assurance Division, that I am responsible for maintaining the records of the DWEB of the Environmental Protection Agency, Region 4, and that the attached documents being produced are true, correct and compared copies of official documents in my legal custody, consisting of:

1. NEIC Civil Investigation Report: City of Jackson Water System (Mar. 2020);
2. Emergency Administrative Order, Docket No. SDWA-04-2020-2300 (effective Apr. 2, 2020);
3. Amendment to Emergency Administrative Order, Docket No. SDWA-04-2020-2300 (effective May 28, 2020);
4. Administrative Compliance Order on Consent, Docket No. SDWA-04-2020-2301 (effective July 1, 2021);
5. Notice of Noncompliance to City of Jackson, Mississippi (May 11, 2020);
6. Notice of Noncompliance to City of Jackson, Mississippi (April 27, 2021); and
7. Notice of Noncompliance to City of Jackson, Mississippi (Jan. 25, 2022)

Subscribed under penalty of perjury on this 22nd day of November, 2022.

BRYAN MYERS Digitally signed by BRYAN MYERS Date: 2022.11.22 15:42:22 -05'00'

Bryan Myers
Chief, Drinking Water Enforcement Branch
Enforcement and Compliance Assurance Division
Environmental Protection Agency
Region 4

Exhibit 1:
2020 Inspection Report

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAR 30 2020

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

The Honorable Chokwe A. Lumumba
Mayor of City of Jackson
219 South President Street
Jackson, Mississippi 39205

Re: Safe Drinking Water Act Compliance Investigation
Public Water System: City of Jackson Public Water System
PWS ID Number: MS0250008

Dear Mayor Lumumba:

On February 3-7, 2020, the U.S. Environmental Protection Agency's National Enforcement Investigations Center conducted a Safe Drinking Water Act (SDWA) compliance inspection of the City of Jackson Public Water System. Enclosed you will find the report prepared by inspectors from the NEIC. Attachments to the report are available upon request.

The EPA would like to thank the City of Jackson and its staff for their time and assistance in completing the inspection. We encourage you to continue to meet regularly with all members of your system and work cooperatively to address important drinking water issues that affect all served by this public water system.

Please continue to comply with Emergency Administrative Order SDWA-02-2020-2300. If you have any questions or need assistance, you may contact Amanda Driskell at (404) 562-9735 or driskell.amanda@epa.gov.

Sincerely,

JAIRO CASTILLO

Digitally signed by JAIRO CASTILLO
Date: 2020.03.30 10:47:45 -04'00'

Jairo Castillo
Chief, Drinking Water and Wastewater Section
Water Enforcement Branch

Enclosure

cc: Robert K Miller, Director, City of Jackson Department of Public Works
Lester Herrington, Director of Office of Environmental Health, MSDH

Mailing Addresses for the CCs:
Mr. Robert K. Miller, Director
City of Jackson Department of Public Works
200 South President Street
Jackson, Mississippi 39205-0017

William Moody, MSDH
Bureau of Public Water Supply
P.O. Box 1700
2423 North State Street
Jackson, MS 39215-1700

United States Environmental Protection Agency
Office of Enforcement and Compliance Assurance
Office of Criminal Enforcement, Forensics and Training

National Enforcement Investigations Center

NEIC

NEICVP1369E01

NEIC CIVIL INVESTIGATION REPORT
City of Jackson Water System
Jackson, Mississippi 39201

Investigation Dates:
February 3-7, 2020

TRENT RAINEY
Digitally signed by TRENT RAINEY
Date: 2020.03.24 16:32:39 -06'00'
Trent Rainey, Project Manager, NEIC

Authorized for Release by:

REBECCA CONNELL
DN: c=US, o=U.S. Government, ou=Environmental Protection Agency, cn=REBECCA CONNELL, 0.9.2342.19200300.100.1.1=68001003671948
Date: 2020.03.24 16:52:38 -06'00'
Rebecca Connell, Field Branch Chief, NEIC

Report Prepared for:
EPA Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street SW
Atlanta, Georgia 30303

NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
P.O. Box 25227
Building 25, Denver Federal Center
Denver, Colorado 80225

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APPENDICES

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INVESTIGATION OVERVIEW

PROJECT OBJECTIVE

At the request of U.S. Environmental Protection Agency (EPA) Region 4 (Region), EPA's National Enforcement Investigations Center (NEIC) conducted a Safe Drinking Water Act (SDWA) compliance investigation of the city of Jackson, Mississippi, public water system (PWS). The investigation assessed the PWS's compliance with the Lead and Copper Rule (LCR) found in 40 Code of Federal Regulations (CFR) Part 141, Subpart I, §141.80 – 91. This investigation was also conducted as part of EPA's National Compliance Initiative to Reduce Noncompliance with Drinking Water Standards at Community Water Systems.

NEIC accomplished the investigation objective by conducting a review of historical compliance data and conducting an on-site inspection of the PWS. The on-site inspection focused on a technical evaluation of the current operational status of the systems, including capital improvements and operational changes that had been implemented as a result of the system's violations of the LCR. The violations began in 2015.

The project team members are listed in **Table 1**.

Table 1. PROJECT TEAM MEMBERS

Team Member	Organization	Project Role
Trent Rainey	NEIC	Project manager (PM)
Hannah Branning	NEIC	Field team member
David Parker	NEIC	Field team member
Daren Vanlerberghe	NEIC	Field team member
Kara Sinon	EPA Region 2	Field team member, under direction of Trent Rainey

FACILITY CONTACT INFORMATION

Table 2 lists the primary facility contacts.

Table 2. FACILITY CONTACT INFORMATION

Name, Title	Phone No.	Email Address
Robert K. Miller, Director of Public Works	(601) 960-0290	rmiller@jacksonms.gov
Charles Williams Jr., City Engineer	(601) 960-1651	cwilliams@jacksonms.gov
Mary D. Carter, Deputy Director of Public Works	(601) 960-2090	mdcarter@jacksonms.gov
Terence Byrd, Operations Supervisor	(601) 213-8572	tbyrd@jacksonms.gov

FACILITY OVERVIEW

The city of Jackson is the capital of the state of Mississippi and is located on the Pearl River. The city has a population of 164,422, according to the most recent United States census estimates. The PWS operates under North American Industry Classification System (NAICS)

code 221310 (drinking water treatment). The city's public works department operates the PWS and provides water and wastewater services for its citizens. The Mississippi State Department of Health (MSDH) administers the Public Water Supply Supervision Program in Mississippi and has been granted primary enforcement responsibility (i.e., primacy) for the LCR.

FACILITY OPERATIONS SUMMARY

The PWS operates two surface water treatment plants (WTPs). The WTPs serve designated portions of the overall distribution systems but can service a portion of each other's systems if necessary.

The O.B. Curtis WTP, located at 100 O B Curtis Drive, Ridgeland, Mississippi, is a 50 million gallon per day (mgd), two-train system. Half of the WTP's treatment capacity is provided by a conventional treatment plant and the other half by a membrane filtration treatment system. Raw water is sourced from the Ross Barnett Reservoir, which is fed by the Pearl River. The intake structure draws water from the reservoir through steel bar screens. Intake water may be dosed with potassium permanganate as needed to reduce manganese. Water from the intake structure travels approximately 0.8 miles through two parallel 60-inch lines to the plant headworks.

At the headworks, the raw water is discharged into a wet well. Water from the wet well passes through two travelling 1-millimeter sieve screens. Screened water is discharged into two wet wells. Potassium permanganate is continuously fed into the wet wells for manganese reduction. Screened water from the wet wells is pumped to two parallel pre-oxidation tanks, which mark the separation of the treatment system into two trains (or systems). The pre-oxidation tank serving the conventional treatment system is uncovered, while the tank serving the membrane system is covered.

Water entering the conventional pre-oxidation system is dosed with aluminum chlorohydrate (ACH) and a polymer in a flash mix tank. Two soda ash tanks were constructed in late 2019 to inject soda ash into the flash tank. The flash mix tank discharges, in turn, to a three-stage flocculation tank (fast, medium, and slow speeds on the mixers). From the slow mix flocculation stage, the water discharges to three rectangular sedimentation tanks (or basins). Solids from the sedimentation basins are designed to be removed by an automatic sludge removal system. Effluent from the sedimentation tanks is further treated in 12 rapid sand filters to reduce turbidity and solids. Backwash of the filters is manually controlled, and performed on an elapsed-time basis, rather than on a head-loss basis. The duration of the back-wash cycle is based on effluent turbidity but is typically 20 minutes. The filtered water is disinfected with ultra-violet (UV) lamps and discharged from the UV reactors to a clear well.

The disinfection residual is maintained with chloramines, and the water is fluorinated before it is discharged to the distribution system.

Water from the pre-oxidation membrane system is dosed with ACH in a flash mix tank, mixed in a flocculation tank, and then passed into the ultrafiltration tank, where the water is filtered through submerged ultrafiltration membranes. An air sparging system is used to keep the filters clear of attached solids and floc. Air sparging is activated approximately every 30 seconds. Filtered water is disinfected with in-line UV lamps, and the chlorine residual is maintained with chloramines. The ultrafiltration water is stored in a clear well separate from the conventional treatment train. Water from both clear wells is combined into a common header before it is discharged to the distribution system. Membrane integrity tests are conducted routinely; chemical cleaning of the membranes occurs as needed to remove fouling that is not controlled by air sparging.

The J.H. Fewell WTP is located at 2303 Laurel Street, Jackson, Mississippi. It is a 25 mgd conventional treatment plant that began operations in 1914. Significant portions of the original plant have been decommissioned but are still present on-site. Raw water is sourced at an intake structure on the Pearl River. Chemical addition at two flash mixers consists of aluminum sulfate (alum), a polymer for flocculation, and hydrated lime for pH adjustment. The flow is then divided between two separate treatment trains. Each train consists of a slow mix flocculator, then solids are settled in a rectangular sedimentation tank. The sedimentation tanks are designed with an automated solids removal system. Filtration is accomplished through 18 rapid sand filters that are manually backwashed on a set schedule. Filtered water is disinfected with in-line UV lamps and stored in two on-site clear well storage tanks. Chlorine dioxide is generated on-site and applied as needed for manganese reduction and taste and odor control. Flouride and chloramines are injected into the water before it reaches the clear wells.

In addition to the WTPs, Jackson operates a system of groundwater wells that predominantly serve the southern portion of the city. Nine wells are listed as part of the system. Three of the wells are listed as inactive. Each well uses gaseous chlorine injection for disinfection and sodium flouride for fluoridation. The well system was removed from service in 2014 in order to provide treated surface water to the southern portion of Jackson. However, the wells were brought back online in July 2015 as a result of distribution systems issues.

FIELD ACTIVITIES SUMMARY

NEIC conducted the on-site inspection from February 3-7, 2020. The NEIC inspection team consisted of Trent Rainey, Hannah Branning, David Parker, and Daren Vanlerberghe. Amanda Driskell, Araceli Chavez, and Rebecca Quinones from EPA Region 4, and Kara Sinon from EPA Region 2 also participated in the inspection. Les Harrington, William Moody, Karen Walters,

Amy McLeod, Hunter Ladner, Jeffrey Estridge, Charles Schultz, and Thomas Long from MSDH were also present during the inspection. Photographs taken by NEIC during the inspection are found in **Appendix A.**

On February 3, 2020, NEIC inspectors conducted an opening meeting and presented credentials to Mr. Robert Miller, director of public works for the city of Jackson. On February 7, 2020, NEIC inspectors conducted a closing meeting with the PWS and MSDH. Lists of the meeting attendees are found in **Appendix B**.

NEIC assessed the city of Jackson's compliance with the LCR. The assessment included detailed discussions and field observations of the intakes, WTPs, wells, storage facilities, and the distribution system. The assessment also included a review of records, including system maps, monitoring records (both process control and compliance monitoring), engineering evaluations, and steps that the facility has taken and plans to take to comply with the LCR.

NEIC review of compliance monitoring data and discussions with MSDH officials and city of Jackson representatives revealed that lead action level exceedances (ALE) of the LCR had occurred in in three consecutive monitoring periods in 2015 and 2016. Since that time, treatment technique violations of the LCR also have occurred as the city failed to comply with its optimal water quality parameters.

In response to these LCR violations, MSDH issued a compliance plan to the city of Jackson on February 12, 2016, requiring improvements to be completed by December 29, 2019, to address the LCR violations. The compliance plan is found in **Appendix C**.

INVESTIGATION OBSERVATIONS

NEIC made the following observations during the SDWA compliance inspection of the city of Jackson, Mississippi, PWS. NEIC field team members discussed all observations with facility representatives during the closeout meeting, unless otherwise noted in the observation description below.

These observations are not final compliance determinations. EPA Region 4 will make the final compliance determinations based on its review of this inspection report and other technical, regulatory, and facility information.

Observation: 1

Observation Summary: The city of Jackson failed to fully implement lead and copper tap water monitoring requirements, including materials evaluation conditions and sample collection procedures.

Citation:

40 CFR § 141.86(a) – *Monitoring requirements for lead and copper in tap water*

(a) Sample site location. (1) By the applicable date for commencement of monitoring under paragraph (d)(1) of this section, each water system shall complete a materials evaluation of its distribution system in order to identify a pool of targeted sampling sites that meets the requirements of this section, and which is sufficiently large to ensure that the water system can collect the number of lead and copper tap samples required in paragraph (c) of this section. All sites from which first draw samples are collected shall be selected from this pool of targeted sampling sites. Sampling sites may not include faucets that have point-of-use or point-of-entry treatment devices designed to remove inorganic contaminants.
(2) A water system shall use the information on lead, copper, and galvanized steel that it is required to collect under § 141.42(d) of this part [special monitoring for corrosivity characteristics] when conducting a materials evaluation. When an evaluation of the information collected pursuant to § 141.42(d) is insufficient to locate the requisite number of lead and copper sampling sites that meet the targeting criteria in paragraph (a) of this section, the water system shall review the sources of information listed below in order to identify a sufficient number of sampling sites. In addition, the system shall seek to collect such information where possible in the course of its normal operations (e.g., checking service line materials when reading water meters or performing maintenance activities):

(i) All plumbing codes, permits, and records in the files of the building department(s) which indicate the plumbing materials that are installed within publicly and privately-owned structures connected to the distribution system;

(ii) All inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system; and

(iii) All existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations.

Observation: 1

(b) Sample collection methods.(1) All tap samples for lead and copper collected in accordance with this subpart, with the exception of lead service line samples collected under § 141.84(c) and samples collected under paragraph (b)(5) of this section, shall be first-draw samples.

(2) Each first-draw tap sample for lead and copper shall be one liter in volume and have stood motionless in the plumbing system of each sampling site for at least six hours. First-draw samples from residential housing shall be collected from the cold-water kitchen tap or bathroom sink tap. First-draw samples from a nonresidential building shall be one liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. Non-first-draw samples collected in lieu of first-draw samples pursuant to paragraph (b)(5) of this section shall be one liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. First-draw samples may be collected by the system or the system may allow residents to collect first-draw samples after instructing the residents of the sampling procedures specified in this paragraph. To avoid problems of residents handling nitric acid, acidification of first-draw samples may be done up to 14 days after the sample is collected. After acidification to resolubilize the metals, the sample must stand in the original container for the time specified in the approved EPA method before the sample can be analyzed. If a system allows residents to perform sampling, the system may not challenge, based on alleged errors in sample collection, the accuracy of sampling results.

(c) Number of samples. Water systems shall collect at least one sample during each monitoring period specified in paragraph (d) of this section from the number of sites listed in the first column ("standard monitoring") of the table in this paragraph. A system conducting reduced monitoring under paragraph (d)(4) of this section shall collect at least one sample from the number of sites specified in the second column ("reduced monitoring") of the table in this paragraph during each monitoring period specified in paragraph (d)(4) of this section. Such reduced monitoring sites shall be representative of the sites required for standard monitoring. A public water system that has fewer than five drinking water taps, that can be used for human consumption meeting the sample site criteria of paragraph (a) of this section to reach the required number of sample sites listed in paragraph (c) of this section, must collect at least one sample from each tap and then must collect additional samples from those taps on different days during the monitoring period to meet the required number of sites. Alternatively the State may allow these public water systems to collect a number of samples less than the number of sites specified in paragraph (c) of this section, provided that 100 percent of all taps that can be used for human consumption are sampled. The State must approve this reduction of the minimum number of samples in writing based on a request from the system or onsite verification by the State. States may specify sampling locations when a system is conducting reduced monitoring. The table is as follows:

System size (number of people served)	Number of sites (standard monitoring)	Number of sites (reduced monitoring)
>100,000	100	50
10,001 to 100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
≤100	5	5

Observation: 1

(d) Timing of monitoring -

(1) Initial tap sampling. *The first six-month monitoring period for small, medium-size and large systems shall begin on the following dates:*

System size (No. people served)	First six-month monitoring period begins on
>50,000	January 1, 1992.
3,301 to 50,000	July 1, 1992.
≤3,300	July 1, 1993.

(i) All large systems shall monitor during two consecutive six-month periods.

(ii) All small and medium-size systems shall monitor during each six-month monitoring period until:

(A) The system exceeds the lead or copper action level and is therefore required to implement the corrosion control treatment requirements under § 141.81, in which case the system shall continue monitoring in accordance with paragraph (d)(2) of this section, or

(B) The system meets the lead and copper action levels during two consecutive six-month monitoring periods, in which case the system may reduce monitoring in accordance with paragraph (d)(4) of this section.

Evidence:

Lead and copper monitoring results from 2015-2019 (**Appendix D**)
Inspector observations of files provided by the city of Jackson
Interviews with city of Jackson staff
City of Jackson customer sampling procedure documents (**Appendix E**)

Description of Observation:

- The city of Jackson did not complete a materials evaluation of its distribution system by January 1, 1992, in order to identify a pool of targeted sampling sites. This evaluation, which was required to have been submitted 28 years ago, should have been used to identify lead and copper regulatory compliance monitoring sites.
- The city of Jackson does not maintain a current inventory of distribution system materials and does not collect or document materials information in the course of normal operations. Inspectors were not able to verify tiering information utilized in the lead and copper sampling plan.
- The city of Jackson failed to provide evidence that samples sat motionless for at least 6 hours. Customer sampling procedure forms document this finding. In addition, several customer sampling procedure documents could not be linked to sample sites (i.e., they did not have an address or sample identification number).
- Duplicate samples were collected from the same site in the same compliance period and used to meet the required minimum number of samples. EPA inspectors observed this in monitoring data collected in October 2017, October 2018, April 2019, and October 2019. The city of Jackson is required to collect 100 samples every 6 months. Per the sampling plan, the city of Jackson had identified over 300 sampling sites.

Observation: 1

- Not all sample results provided by the city of Jackson and reviewed by EPA inspectors were from sites or locations listed on the approved lead and copper sampling plan. EPA inspectors observed this in monitoring data collected in May 2017, October 2017, April 2018, October 2018, April 2019, and October 2019. Sample sites change from monitoring period to monitoring period with no documentation. There was evidence that some records may have been kept that explained these changes, but not all records were available and no system is in place to document this information.
- At times, city of Jackson staff filled in missing information on customer sample collection forms (e.g., added a.m. or p.m. to the time). EPA inspectors observed this on the "Site 181 Homeowner Lead/Copper Sample Collection" form from April 2018.
- During the April 2019 compliance monitoring period, some samples were not taken to the state laboratory for analysis. EPA inspectors documented that sample collection forms were retained for sites 12 and 181 and that no corresponding laboratory results were reported for these sites.
- Sample result forms contain data errors such as incorrect sample collection date, incorrect site numbers, and incorrect addresses. This observation was determined by MSDH to be data entry error by MSDH staff as they received sample results from the state laboratory. EPA inspectors observed this in the October 2018 sampling data. EPA inspectors discussed this observation with MSDH staff while on-site, and MSDH invalidated two compliance samples from this monitoring period, issued corrections to the sampling data, and recalculated the 90th percentiles for lead and copper.

Observation: 2

Observation Summary: The city of Jackson failed to provide documentation regarding the change in source from groundwater to surface water, and associated disinfection differences, in October 2014.

The city of Jackson has not been able to consistently meet optimal water quality parameters for the water exiting the O.B. Curtis or J.H. Fewell WTPs.

Citation:

40 CFR § 141.90(a)(3) – *Reporting Requirements*

At a time specified by the State, or if no specific time is designated by the State, then as early as possible prior to the addition of a new source or any long-term change in water treatment, a water system deemed to have optimized corrosion control under § 141.81(b)(3), a water system subject to reduced monitoring pursuant to § 141.86(d)(4), or a water system subject to a monitoring waiver pursuant to § 141.86(g), shall submit written documentation to the State describing the change or addition. The State must review and approve the addition of a new source or long-term change in treatment before it is implemented by the water system. Examples of long-term treatment changes include the addition of a new treatment process or modification of an existing treatment process. Examples of modifications include switching secondary disinfectants, switching coagulants (e.g., alum to ferric chloride), and switching corrosion inhibitor products (e.g., orthophosphate to blended phosphate). Long-term changes can include dose changes to existing chemicals if the system is planning long-term changes to its finished water pH or residual inhibitor concentration.

Observation: 2

Long-term treatment changes would not include chemical dose fluctuations associated with daily raw water quality changes.

40 CFR § 141.82(g) ***Continued operation and monitoring*** *– all systems optimizing corrosion control shall continue to operate and maintain optimal corrosion control treatment, including maintaining water quality parameters at or above minimum values or within ranges designated by the State under paragraph (f) of this section, in accordance with this paragraph for all samples collected under § 141.87(d) through (f). Compliance with the requirements of this paragraph shall be determined every six months, as specified under § 141.87(d). A water system is out of compliance with the requirements of this paragraph for a six-month period if it has excursions for any State-specified parameter on more than nine days during the period. An excursion occurs whenever the daily value for one or more of the water quality parameters measured at a sampling location is below the minimum value or outside the range designated by the State. Daily values are calculated as follows. States have discretion to delete results of obvious sampling errors from this calculation.*

Evidence:

Inspector observations of files provided by the city of Jackson
Interview with MSDH staff
City of Jackson monthly operating reports (MORs) for 2016 through 2019 (**Appendices F-1 to F-4**)
February 12, 2016, compliance plan issued by MSDH (**Appendix C**)
January 29, 2020, treatment technique violation issued by MSDH (**Appendix G**)

Description of Observation:

In October 2014, the city of Jackson's water source and treatment changed. The city replaced the groundwater system water with surface water from the O.B. Curtis WTP, following the completion of the 5 million-gallon (MG) booster station on TV Road. The groundwater system used gaseous chlorine to disinfect the water; the surface water system used chloramines. This was anticipated to be a long-term change. EPA inspectors observed that, prior to the source and treatment change, no evidence was provided by the city of Jackson or MSDH that a corrosion control treatment (CCT) study or water quality evaluation had been completed. The city of Jackson did not make a formal request to MSDH to change its source from groundwater to surface water.

In June 2015, the city of Jackson exceeded the lead action level. MSDH did not notify the city of Jackson of the exceedance until January 2016. The lead ALE no longer allowed the city of Jackson to be on reduced monitoring for lead and copper. The city of Jackson was now required to sample at 100 sites every 6 months, as required under standard lead and copper monitoring.

In July 2015, due to some water treatment plant and distribution issues, the 5 MG tank at the TV Road booster station was not able to fill and provide water to the area previously served by the groundwater wells. To keep all residents supplied with water, the city, via an email to MSDH, requested to turn its wells back on. The TV Road booster station and tank have not been used since groundwater production resumed in July 2015.

In February 2016, the city of Jackson exceeded the lead action level.

Observation: 2

On February 12, 2016, MSDH issued a compliance plan to the city of Jackson. Among other things, the compliance plan stated that, "until such time as a completed plan for the optimization of water treatment for the City of Jackson can be developed... must ensure functional treatment of water in the current system to maintain a constant pH of at least 8.5 and alkalinity between 50 mg/L and 70 mg/L." MSDH did not enter the water quality parameter violation that occurred during the January-June 2016 monitoring period into the Safe Drinking Water Information System (SDWIS) until November 2018. EPA inspectors observed that the city of Jackson did not meet the required water quality parameters at both the O.B. Curtis and J.H. Fewell WTPs for three consecutive 6-month monitoring periods (July-December 2016, January-June 2017, and July-December 2017). Public notice was not provided for each of these instances. MSDH has not entered any of the violations into SDWIS.

In August 2016, the city of Jackson exceeded the lead action level.

On December 29, 2017, MSDH issued a letter to city of Jackson, responding to the city's "Optimal Corrosion Control Treatment" (OCCT) desktop study dated July 1, 2016. The letter concurred with the recommended pH range and approved the pH adjustment recommendations, specifically the switch from lime to soda ash. MSDH established a deadline of May 31, 2019, for the city to complete the backup pH adjustment system at the O.B. Curtis WTP (understood primary system already in place) and to construct similar facilities at the J.H. Fewell WTP. MSDH was to designate optimal water quality parameters (OWQPs), based on the OCCT report, to monitor the effectiveness of the installed treatment, even as some elements of the new process have yet to be installed:

Entry-point pH: > 9.0.
Distribution system pH: > 8.6
Alkalinity: >25 milligrams per liter (mg/L)
Dissolved inorganic carbon (DIC): 5-10 mg/L

On June 27, 2018, the city of Jackson requested an extension to the MSDH compliance plan for installing corrosion control treatment. Specifically, the city of Jackson requested to extend the O.B. Curtis WTP deadline from May 2019 to November 2019, and improvements at the J.H. Fewell WTP to December 2019.

On August 13, 2019, MSDH granted the city of Jackson the requested extensions for both WTP compliance plans. MSDH also responded to the city of Jackson's request to modify the designated OWQPs, stating that any deviations to what was previously set must be supported by an amended corrosion control study.

On December 18, 2019, MSDH confirmed in a letter to the PWS that a final inspection for improvements at the O.B. Curtis WTP took place on November 15, 2019. MSDH stated that it anticipated noncompliance with the December 30, 2019, deadline at the J.H. Fewell WTP.

Observation: 2

On January 29, 2020, MSDH issued a treatment technique (TT) violation to the city of Jackson for its failure to install corrosion control treatment, as required in the compliance plan, at the J. H. Fewell WTP.

The city of Jackson has not been able to consistently meet water quality parameters for water exiting the O.B. Curtis or J.H. Fewell WTPs. The January 29, 2020, MSDH TT violation also cited this failure to meet water quality parameter minimum values.

EPA inspectors noted that MSDH designated no OWQPs prior to the June 2015 lead ALE.

Observation: 3

Observation Summary: The city of Jackson failed to conduct required public education tasks and failed to provide required consumer notifications related to lead action level exceedances.

Citation:

40 CFR § 141.86(d)(iv) Timing of monitoring – *any water system on a reduced monitoring schedule for lead and copper tap samples must collect the samples during the period of June 1 through September 30 and report the results to the state by October 10 of that year, unless the state has approved a different sampling period in accordance with 40 CFR 141.86(d)(4)(iv)(A).*

40 CFR § 141.85(b)(2) Delivery of public education materials – *A community water system that exceeds the lead action level on the basis of tap water samples collected in accordance with § 141.86, and that is not already conducting public education tasks under this section, must conduct public education tasks under this section within 60 days after the end of the monitoring period in which the exceedance occurred.*

40 CFR § 141.90(f)(3) Reporting requirements – *no later than three months following the end of the monitoring period, each system must mail a sample copy of the consumer notification of tap results to the State along with a certification that the notification has been distributed in a manner consistent with the requirements of 40 C.F.R. § 141.85(d).*

Evidence:

Inspector observations
Lead and copper monitoring results from 2015-2019 (**Appendix D**)
Consumer notices provided by the city of Jackson and MSDH (**Appendix H**)
EPA Region 4 *MSDH Priority Review Final Report* dated March 28, 2018 (final report dated January 24, 2020) (**Appendix I**)

Description of Observation:

- EPA inspectors confirmed the previously documented finding regarding late reporting and notification of lead results from MSDH to the city of Jackson following the 2015 lead ALE, and the associated delayed public education by the city of Jackson.
- The city of Jackson failed to provide the consumer notice certification forms for the second half of 2017 and the second half of 2018.
- A review of the consumer notice certifications provided by the city of Jackson showed that, for the first half 2016, the certification form was filled out, signed, and dated that consumer notices were distributed in February 2016, before the date the last sample result was analyzed for that period in March 2016.

Observation: 3

- EPA inspectors discovered customer complaints on the "Homeowner Lead/Copper Sample Collection" forms from sampling conducted in October 2018 that they were not being notified of the lead and copper sampling results. A note on a form from an unnumbered site read "we never receive any explanation about the water – no one tells us if we have lead or not!"

Observation: 4

Observation Summary: The city of Jackson has not implemented a lead service line replacement program and has not completed a materials evaluation to identify potential lead service lines

Citation:

40 CFR § 141.84 ***Lead service line replacement requirements*** *– (a) Systems that fail to meet the lead action level in tap samples taken pursuant to § 141.86(d)(2), after installing corrosion control and/or source water treatment (whichever sampling occurs later), shall replace lead service lines in accordance with the requirements of this section. If a system is in violation of § 141.81 or § 141.83 for failure to install source water or corrosion control treatment, the State may require the system to commence lead service line replacement under this section after the date by which the system was required to conduct monitoring under § 141.86(d)(2) has passed. (b)(1) A water system shall replace annually at least 7 percent of the initial number of lead service lines in its distribution system. The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins. The system shall identify the initial number of lead service lines in its distribution system, including an identification of the portion(s) owned by the system, based on a materials evaluation, including the evaluation required under § 141.86(a) and relevant legal authorities (e.g., contracts, local ordinances) regarding the portion owned by the system. The first year of lead service line replacement shall begin on the first day following the end of the monitoring period in which the action level was exceeded under paragraph (a) of this section. If monitoring is required annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs. If the State has established an alternate monitoring period, then the end of the monitoring period will be the last day of that period.*

Evidence:
Interview with William Miley, city of Jackson water/sewer utilities manager
Inspector observations

Description of Observation:
The city of Jackson has not implemented a lead service line replacement program following the initial (June 2015) lead ALE.

The city of Jackson has not completed a materials evaluation to identify potential lead service lines, which was required when the Lead and Copper Rule was promulgated in 1991.

Observation: 5

Observation Summary: The city of Jackson did not provide lead and copper results for both monitoring periods in its consumer confidence reports for the years 2016 or 2018.

Observation: 5
Citation: **40 CFR § 141.153(vi) – *Content of the reports* –** *each community water system must provide to its customers an annual report that contains specific information, including lead and copper 90th percentile values from the most recent round of lead and copper sampling and the number of sampling sites that exceeded the action level.*
Evidence: City of Jackson consumer confidence reports 2016-2019 (**Appendix J**)
Description of Observation: The city of Jackson did not provide lead and copper results for both monitoring periods in its consumer confidence reports for the years 2016 or 2018.

Observation: 6
Observation Summary: Turbidity exceedances were reported at both the O.B. Curtis and J.H. Fewell WTPs in the January 2020 MOR. The O.B. Curtis WTP MOR also reported no individual filter turbidity exceedances for January 2020, even though the continuous turbidity monitoring equipment at that plant was reported to give inaccurate readings because it had not been calibrated and maintained in approximately 3 years.
Citation: **40 CFR § 141.173 – Filtration.** *A public water system subject to the requirements of this subpart that does not meet all of the criteria in this subpart and subpart H of this part for avoiding filtration must provide treatment consisting of both disinfection, as specified in § 141.72(b), and filtration treatment which complies with the requirements of paragraph (a) or (b) of this section or § 141.73 (b) or (c) by December 31, 2001.* *(a) Conventional filtration treatment or direct filtration.* *(1) For systems using conventional filtration or direct filtration, the turbidity level of representative samples of a system's filtered water must be less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month, measured as specified in § 141.74(a) and (c).* *(2) The turbidity level of representative samples of a system's filtered water must at no time exceed 1 NTU, measured as specified in § 141.74(a) and (c).* **40 CFR § 141.174 – Filtration sampling requirements.** *(a) Monitoring requirements for systems using filtration treatment. In addition to monitoring required by § 141.74, a public water system subject to the requirements of this subpart that provides conventional filtration treatment or direct filtration must conduct continuous monitoring of turbidity for each individual filter using an approved method in § 141.74(a) and must calibrate turbidimeters using the procedure specified by the manufacturer. Systems must record the results of individual filter monitoring every 15 minutes.* *(b) If there is a failure in the continuous turbidity monitoring equipment, the system must conduct grab sampling every four hours in lieu of continuous monitoring, but for no more than five working days following the failure of the equipment.*

Observation: 6

Evidence:
City of Jackson water system January and February 2020 MORs (**Appendix F-5**)
Conversations with WTP operators, supervisors, and maintenance staff

Description of Observation:
In January 2020, the city of Jackson reported in its MOR that multiple turbidity exceedances had occurred at the O.B. Curtis and J.H. Fewell WTPs. Finished water turbidity reached 1.35 Nephelometric Turbidity Units (NTU) at the O.B. Curtis WTP and 3.00 NTU at the J.H. Fewell WTP. Turbidities exceeding 1.0 NTU were reported on 1 day at the O.B. Curtis WTP and on 3 days at the J.H. Fewell WTP. Also, the O.B. Curtis WTP reported that 93.5 percent of turbidity samples were equal to or less than the turbidity limit of 0.3 NTU. The city reported, in item 3 of the O.B. Curtis WTP MOR, that no filters had exceeded 0.5 NTU in two consecutive readings taken 15 minutes apart after the first 4 hours of operation. The city reported, in item 4 of the O.B. Curtis WTP MOR, that no filters had exceeded 1.0 NTU in two consecutive readings taken 15 minutes apart in 3 consecutive months. Inspectors learned that the continuous turbidity monitoring equipment at the O.B. Curtis WTP has read inaccurately for approximately 3 years due to a lack of calibration and maintenance, and that turbidity samples were taken during this time period at a frequency of once per shift, for a total of 3 times per day.

In February 2020, the city of Jackson reported in its MOR that multiple turbidity exceedances had occurred at the O.B. Curtis WTP. Finished water turbidity was reported to have reached 1.55 NTU for the membrane-treated water at the O.B. Curtis WTP. Turbidities exceeding 1.0 NTU were reported on 1 day at the O.B. Curtis WTP. Based on information provided in the MOR, the continuous turbidity monitoring equipment at the O.B. Curtis WTP was calibrated on February 28, 2020.

This observation was not discussed at the close-out meeting since it was discovered once the MORs were submitted after the on-site inspection ended.

Observation: 7

Observation Summary: Disinfection issues were found at both the O.B. Curtis and J.H. Fewell WTPs. Maximum residual disinfectant levels (MRDLs) for chloramines were exceeded at both plants. UV disinfection devices were found to be offline for significant periods of time at both plants.

Citation:
40 CFR § 141.65 – *Maximum residual disinfectant levels.* *(a) Maximum residual disinfectant levels (MRDLs) are as follows:*

Disinfectant residual	MRDL (mg/L)
Chlorine	4.0 (as Cl_2).
Chloramines	4.0 (as Cl_2).
Chlorine dioxide	0.8 (as ClO_2).

40 CFR § 141.720(d)(3) – *Reactor monitoring.* *(i) Systems must monitor their UV reactors to determine if the reactors are operating within validated conditions, as determined under paragraph (d)(2) of this section. This monitoring must include UV intensity as measured by a UV sensor, flow rate, lamp status, and other parameters the State designates based on UV reactor operation. Systems must verify the calibration of UV sensors and must recalibrate*

Observation: 7

sensors in accordance with a protocol the State approves. (ii) To receive treatment credit for UV light, systems must treat at least 95 percent of the water delivered to the public during each month by UV reactors operating within validated conditions for the required UV dose, as described in paragraphs (d)(1) and (2) of this section. Systems must demonstrate compliance with this condition by the monitoring required under paragraph (d)(3)(i) of this section.

Evidence:

City of Jackson water system January and February 2020 MORs (**Appendix F-5**)
MSDH sanitary survey for the city of Jackson water system dated November 21, 2019 (**Appendix K**)
Conversations with water operators, supervisors, and maintenance staff

Description of Observation:

In January and February 2020, the city of Jackson reported in its MORs that multiple MRDL concentrations had exceeded the regulatory limits at the O.B. Curtis and J.H. Fewell WTPs. The MRDL is the highest level of a disinfectant residual that is allowed in the drinking water. Seven instances of MRDLs exceeding 4.0 mg/L of chloramines were reported on 5 days during January 2020 at the O.B. Curtis WTP; seven instances of MRDLs exceeding 4.0 mg/L of chloramines were reported on 4 days during February 2020 at the O.B. Curtis WTP; four instances of MRDLs exceeding 4.0 mg/L of chloramines were reported on 3 days in January 2020 at the J.H. Fewell WTP; and two instances of MRDLs exceeding 4.0 mg/L of chloramines were reported on 2 days in February 2020 at the J.H. Fewell WTP.

UV disinfection treatment is installed in each filter's effluent flow piping at both the O.B. Curtis and J.H. Fewell WTPs. However, in January 2020, the city of Jackson reported in its MOR that, for the J.H. Fewell WTP, UV reactor 1 was offline for the entire month (and had been offline since October 16, 2019); UV reactor 2 was offline for 15 of 31 days; UV reactor 3 was offline 17 days; and UV reactor 4 was offline 17 days. In February 2020, at the J.H. Fewell WTP, UV reactor 1 was offline for 13 of 29 days; UV reactor 2 was offline 13 days; UV reactor 3 was offline 7 days; and UV reactor 4 was offline 20 days. During January 2020, at the O.B. Curtis WTP, UV reactor 1 was offline for 2 of 31 days; UV reactor 2 was offline 4 days; UV reactor 3 was offline 1 day; UV reactor 4 was offline 3 days; UV reactor 5 was offline 10 days; and UV reactor 6 was not offline any days. In February 2020, at the O.B. Curtis WTP, UV reactor 1 was offline for 13 of 29 days; UV reactor 2 was offline 8 days; UV reactor 3 was offline 6 days; UV reactor 4 was offline 9 days; UV reactor 5 was offline 17 days; and UV reactor 6 was offline 9 days. This issue was documented in the latest MSDH sanitary survey report (dated November 21, 2019).

Chloramines are used as the residual disinfectant in the water system served by surface water. During the course of the EPA inspection, ammonia leaks occurred at both the O.B. Curtis and J.H. Fewell WTPs. The leak at the O.B. Curtis WTP was repaired by maintenance staff, while a hazardous materials (Hazmat) team was required to help complete the repairs at the J.H. Fewell WTP.

This UV observation was not discussed at the close-out meeting since it was discovered once the MORs were submitted after the on-site inspection ended.

Observation: 8
Observation Summary: EPA inspectors observed infrastructure issues with the distribution system and storage tanks.
Citation: none
Evidence: Interview with William Miley, water/sewer utilities manager Inspector observations
Description of Observation: The city of Jackson's water distribution system experiences numerous leaks and line breaks, with crews reportedly repairing 5 or 6 of these per day. The distribution system is operated by the city's water maintenance department. Loss of pressure associated with these incidents requires the city to issue "Boil Water Notices" (BWNs); over 750 BWNs have been issued since 2016. The distribution lines are aging, and a master plan for pipe replacement issued by the city in 2013 is not being implemented. Instead, the city focuses on replacing those line segments that require 10 to 15 repairs per year. No maintenance log records are kept for line repairs. The city estimated water loss rates in the distribution system of 40 to 50 percent. As a result of these issues, three local hospitals have drilled their own wells and left the city of Jackson's water system in order to have access to reliable sources of drinking water. EPA inspectors visited two above-ground storage tanks, one at Maddox Road (near well #7) and one at the TV Road booster station. EPA inspectors observed standing water around part of the Maddox Road tank near well #7 and that some of the outer wall columns were pulling away from the tank. Settling may be occurring in a non-uniform manner at this tank location. The TV Road booster station tank, which has been unused since 2015, appeared to have concrete chipping occurring around the base of the tank.

Observation: 9
Observation Summary: Some of the continuous monitoring equipment at the O.B. Curtis WTP was found to be inoperable, or providing unreliable, non-calibrated, and potentially inaccurate readings.
Citation: none
Evidence: Inspector observations
Description of Observation: Continuous monitoring equipment at the O.B. Curtis WTP has not been repaired or calibrated for approximately 3 years since the instrument technician position was vacated. This equipment includes pH meters, flow measurement devices, turbidimeters, and the streaming current detector. Comparisons of operator bench laboratory results indicated that the readouts from the continuous pH meters are off by up to 2 units in some instances. Operators must make operational chemical dosing decisions based on three daily grab samples (one grab sample per shift) instead of using the continuous monitoring equipment that has been installed. Operators run the risk of missing flash changes to the water that necessitate immediate chemical dosing changes.

Observation: 10

Observation Summary: EPA inspectors found inadequate operator staffing at the O.B. Curtis and J.H. Fewell WTPs and the groundwater portion of the system.

Citation: Mississippi Primary Drinking Water Regulations – Title 15 – Part 20, Subpart 72 – Rule 2.1.3 – Certificates – *Effective July 1, 1987, all municipal and domestic community water systems must be operated by persons who are certified by the Bureau of Public Water Supply as qualified to operate such facilities.*

Evidence:
2017 and 2019 sanitary surveys for the city of Jackson (**Appendix K**)
Inspector observations

Description of Observation:
MSDH sanitary survey reports for the city of Jackson dating back to 2016 have noted inadequate staffing. The MSDH sanitary survey of November 21, 2019, contained the following comment: "It is vital that both O.B. Curtis and J.H. Fewell be fully staffed with licensed Class A water operators and capable maintenance staff. The City's water treatment is not a simple undertaking and involves complex processes that require 24/7 monitoring and adjustment. These operators are necessary to keep everything running smoothly and ensuring all Federal Safe Drinking Water Act Standards are met."

EPA inspectors noted that the O.B. Curtis WTP is currently running with two operators per shift (three shifts per day). These operators are called upon to collect and analyze grab samples, make operational decisions based on interpretation of sample data, and conduct maintenance when feasible. According to the WTP's organizational chart dated FY 2/27/18, the city has allotted four operators per shift at both WTPs.

EPA inspectors also noted that the wells operated by the water system are only checked three times per week due to staffing shortages.

Observation: 11

Observation Summary: EPA inspectors found operations and maintenance issues at the O.B. Curtis WTP.

Citation: 40 CFR § 141.719 (b) (3) *Direct integrity testing.* *Systems must conduct direct integrity testing in a manner that demonstrates a removal efficiency equal to or greater than the removal credit awarded to the membrane filtration process and meets the requirements described in paragraphs (b)(3)(i) through (vi) of this section. A direct integrity test is defined as a physical test applied to a membrane unit in order to identify and isolate integrity breaches (*i.e.*, one or more leaks that could result in contamination of the filtrate).*

(i) The direct integrity test must be independently applied to each membrane unit in service. A membrane unit is defined as a group of membrane modules that share common valving that allows the unit to be isolated from the rest of the system for the purpose of integrity testing or other maintenance.

(ii) The direct integrity method must have a resolution of 3 micrometers or less, where resolution is defined as the size of the smallest integrity breach that contributes to a response from the direct integrity test.

(iii) The direct integrity test must have a sensitivity sufficient to verify the log treatment credit awarded to the membrane filtration process by the State, where

Observation: 11

sensitivity is defined as the maximum log removal value that can be reliably verified by a direct integrity test. Sensitivity must be determined using the approach in either paragraph (b)(3)(iii)(A) or (B) of this section as applicable to the type of direct integrity test the system uses.

(A) For direct integrity tests that use an applied pressure or vacuum, the direct integrity test sensitivity must be calculated according to the following equation:

$$LRVDIT = LOG10 (Qp /(VCF \times Qbreach))$$

Where:

LRVDIT = the sensitivity of the direct integrity test; Qp = total design filtrate flow from the membrane unit; Qbreach = flow of water from an integrity breach associated with the smallest integrity test response that can be reliably measured, and VCF = volumetric concentration factor. The volumetric concentration factor is the ratio of the suspended solids concentration on the high pressure side of the membrane relative to that in the feed water.

(B) For direct integrity tests that use a particulate or molecular marker, the direct integrity test sensitivity must be calculated according to the following equation:

$$LRVDIT = LOG10(Cf)-LOG10(Cp)$$

Where:

LRVDIT = the sensitivity of the direct integrity test; Cf = the typical feed concentration of the marker used in the test; and Cp = the filtrate concentration of the marker from an integral membrane unit.

(iv) Systems must establish a control limit within the sensitivity limits of the direct integrity test that is indicative of an integral membrane unit capable of meeting the removal credit awarded by the State.

(v) If the result of a direct integrity test exceeds the control limit established under paragraph (b)(3)(iv) of this section, the system must remove the membrane unit from service. Systems must conduct a direct integrity test to verify any repairs, and may return the membrane unit to service only if the direct integrity test is within the established control limit.

(vi) Systems must conduct direct integrity testing on each membrane unit at a frequency of not less than once each day that the membrane unit is in operation. The State may approve less frequent testing, based on demonstrated process reliability, the use of multiple barriers effective for Cryptosporidium*, or reliable process safeguards.*

(4) *Indirect integrity monitoring.* *Systems must conduct continuous indirect integrity monitoring on each membrane unit according to the criteria in paragraphs (b)(4)(i) through (v) of this section. Indirect integrity monitoring is defined as monitoring some aspect of filtrate water quality that is indicative of the removal of particulate matter. A system that implements continuous direct integrity testing of membrane units in accordance with the criteria in paragraphs (b)(3)(i) through (v) of this section is not subject to the requirements for continuous indirect integrity monitoring. Systems must submit a monthly report to the State summarizing all continuous indirect integrity monitoring results triggering direct integrity testing and the corrective action that was taken in each case.*

(i) Unless the State approves an alternative parameter, continuous indirect integrity monitoring must include continuous filtrate turbidity monitoring.

(ii) Continuous monitoring must be conducted at a frequency of no less than once every 15 minutes.

Observation: 11

(iii) Continuous monitoring must be separately conducted on each membrane unit.

*(iv) If indirect integrity monitoring includes turbidity and if the filtrate turbidity readings are above 0.15 NTU for a period greater than 15 minutes (*i.e.*, two consecutive 15-minute readings above 0.15 NTU), direct integrity testing must immediately be performed on the associated membrane unit as specified in paragraphs (b)(3)(i) through (v) of this section.*

(v) If indirect integrity monitoring includes a State-approved alternative parameter and if the alternative parameter exceeds a State-approved control limit for a period greater than 15 minutes, direct integrity testing must immediately be performed on the associated membrane units as specified in paragraphs (b)(3)(i) through (v) of this section.

Evidence:
Inspector observations

Description of Observations:
EPA inspectors made the following observations at the O.B. Curtis WTP during the inspection:

- The raw water screens were rehabilitated in 2014. EPA inspectors found them to be nonfunctional, and operators confirmed that they had been nonfunctional since 2017. It appeared that repairs would soon take place, but a date was unknown. In order to facilitate these repairs, excess raw water flow will be diverted to a nearby stream, which requires National Pollutant Discharge Elimination System permit coverage since the raw water is treated with potassium permanganate at the intake.
- The conventional flow sedimentation basins are equipped with an automatic sludge removal system that has been inoperable for approximately 3 years. This adversely affects settling of treated water and requires operators to manually take down each basin to remove settled solids every weekend.
- Jar tests are not conducted regularly. This testing should be done routinely to confirm that optimal coagulant dosing is being applied at the plant. Since the streaming current detector is used as a basis for those coagulant dosing decisions, without having been calibrated in the past 3 years, the lack of jar testing is significant.
- No filter maintenance has been performed in recent history. In light of the recent turbidity exceedances, it is crucial that system personnel maintain their filters so they are in optimal condition.
- Inspectors found that only 8 of the 12 membrane filtration treatment train flocculator motors were working, and 2 of the operational motors had mechanical issues that required maintenance. Inspectors also learned that only 4 of the 12 flocculator motors were working in the recent past.
- Membrane integrity testing cannot currently be performed due to wear and breakage of the system components and compressor. This issue is related to the fact that the membranes are exposed to sunlight and weather. Operators were found to have covered the membrane units with tarpaulins and run heat trace wiring to minimize the impact of the membranes' exposure to the elements.
- Membrane cleaning cycles are conducted without the use of automatic monitoring equipment for pH and chlorine levels. This equipment has been non-functional for several years.

Observation: 11

- One of the soda ash silos that was constructed as a result of the February 12, 2016, MSDH-issued compliance plan collapsed in early 2018. This incident put the lives of two operators at risk.

Observation: 12

Observation Summary: EPA inspectors found operations and maintenance issues at the J.H. Fewell WTP.

Citation: none

Evidence:
Inspector observations

Description of Observation:
EPA inspectors made the following observations at the J.H. Fewell WTP during the inspection:

- Portions of the plant are over 100 years old and are in a general state of disrepair.
- Safety issues were noted, including loose hand rails inside the buildings at the two intake structures; continuous monitoring equipment placed in a former laboratory that had standing water on the floor; trip hazards (metal cables) on walkways around the sedimentation basins; and evidence of a previous chemical spill against a concrete wall. EPA Region 4 contacted the Occupational Safety and Health Administration concerning these issues following the inspection.
- The lime room needs cleaning. Residual lime was coming out of the lime room and entering the sanitary sewer, which discharges to the wastewater treatment plant. This is a potential Clean Water Act finding as well.
- Open drums of lime were stored in a downstairs room that had standing water on the floor.
- The sedimentation basins are equipped with an automatic sludge removal system that was not functional at the time of the inspection. Each basin must be drained of water periodically, and the settled solids removed manually.
- Operators and maintenance staff are unable to calibrate the streaming current detector.
- Jar tests are not conducted regularly. This testing should be done routinely to confirm that optimal coagulant dosing is being applied at the plant. Since the streaming current detector is used as a basis for those coagulant dosing decisions without having been calibrated in the past 3 years, the lack of jar testing is significant.
- During observation of a filter backwash, low flow was observed in the corners of the filter. No filter maintenance has been performed in recent history. In light of the recent turbidity exceedances, it is crucial that system personnel maintain their filters so they are in optimal condition.

Observation: 13

Observation Summary: EPA inspectors found operations and maintenance issues at the groundwater system.

Citation: 40 CFR § 141.723 (b) - *Requirements to respond to significant deficiencies identified in sanitary surveys performed by EPA - For the purposes of this section, a significant deficiency includes a defect in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that EPA determines to be causing, or has*

Observation: 13

the potential for causing the introduction of contamination into the water delivered to consumers.

Evidence:

Inspector observations

2017 and 2019 sanitary surveys for the city of Jackson (**Appendix K**)

Groundwater treatment technique violation letter from MSDH, May 12, 2017 (**Appendix L**)

Description of Observation:

- MSDH issued a significant deficiency report on May 12, 2017, in response to a November 18, 2016, sanitary survey finding of inadequate application of treatment chemicals and techniques. "The system was not achieving target hardness and alkalinity goals; pilot study underway at inspection; pilot related to lead AL exceedance." Inspectors were unable to verify whether these deficiencies were corrected within 120 days.
- The Siwell Road well has been out of service since December 2019. This is one of the highest producing wells in the portion of the water system that is fed only by groundwater.
- The Willow Wood well had a large hole in the vent screen.
- The wells were equipped for remote telemetry at some point in the past, but this equipment no longer functions.
- Several wellhouses had peeling paint and corroded metal parts.

Observation: 14

Observation Summary: Disinfection byproduct monitoring was not conducted for chlorite and chlorate.

Citation: 40 CFR § 141.132 (b) (2) Chlorite. *Community and nontransient noncommunity water systems using chlorine dioxide, for disinfection or oxidation, must conduct monitoring for chlorite.*

(i) Routine monitoring.

(A) Daily monitoring. *Systems must take daily samples at the entrance to the distribution system. For any daily sample that exceeds the chlorite MCL, the system must take additional samples in the distribution system the following day at the locations required by paragraph (b)(2)(ii) of this section, in addition to the sample required at the entrance to the distribution system.*

(B) Monthly monitoring. *Systems must take a three-sample set each month in the distribution system. The system must take one sample at each of the following locations: near the first customer, at a location representative of average residence time, and at a location reflecting maximum residence time in the distribution system. Any additional routine sampling must be conducted in the same manner (as three-sample sets, at the specified locations). The system may use the results of additional monitoring conducted under paragraph (b)(2)(ii) of this section to meet the requirement for monitoring in this paragraph.*

40 CFR § 141.132 (c) (2) Chlorine dioxide -

(i) Routine monitoring. *Community, nontransient noncommunity, and transient noncommunity water systems that use chlorine dioxide for disinfection or oxidation must*

Observation: 14
take daily samples at the entrance to the distribution system. For any daily sample that exceeds the MRDL, the system must take samples in the distribution system the following day at the locations required by paragraph (c)(2)(ii) of this section, in addition to the sample required at the entrance to the distribution system.
Evidence: Inspector observations City of Jackson water system February 2020 MOR (**Appendix F-5**)
Description of Observation: • EPA inspectors observed chlorine dioxide being added to the water at the J.H. Fewell WTP on February 5, 2020. However, the February 2020 MOR indicates that chlorine dioxide was not fed at the J.H. Fewell WTP on February 5, 2020, nor was any monitoring conducted on that date for chlorine dioxide or chlorite. *This observation was not discussed at the close-out meeting since it was discovered once the February 2020 MOR was submitted after the on-site inspection ended.*

Exhibit 2:

2020 Emergency Administrative Order

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAR 27 2020

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

The Honorable Chokwe A. Lumumba
Mayor of City of Jackson
219 South President Street
Jackson, Mississippi 39205

Re: Emergency Administrative Order under SDWA Section 1431, 42 U.S.C. § 300i
Public Water System: City of Jackson Public Water System
PWS ID Number: MS0250008
Docket No.: SDWA-SDWA-04-2020-2300

Dear Mayor Lumumba:

Enclosed is an Emergency Administrative Order (Order) issued by the U.S. Environmental Protection Agency to the City of Jackson, Mississippi (Respondent), as the owner/operator of the City of Jackson Public Water System (System), pursuant to section 1431 of the Safe Drinking Water Act (SDWA), 42 U.S.C. § 300i.

Based on observations made by the EPA during its inspection conducted the week of February 3, 2020, and review of the documents provided by Respondent in response to the EPA's request for information issued pursuant to its authority under section 1445 of the SDWA, 42 U.S.C. § 300j-4, the EPA has determined that conditions exist at the System that present an imminent and substantial endangerment to the persons served by the System. Based on evidence of turbidity exceedances, disinfection treatment concerns, and/or the condition of the distribution system, the System has the potential to have the presence of *E. Coli*, *Cryptosporidium,* or *Giardia* in the drinking water being served to its customers. Therefore, pursuant to section 1431 of the SDWA, 42 U.S.C. § 300i, the EPA is authorized to take actions necessary to protect human health. The Order and its requirements are necessary to ensure adequate protection of public health.

The enclosed Order sets forth the actions that must be taken to ensure that the people served by the System are provided with safe drinking water. The Order requires the System to, among other things: (1) develop and implement a plan to address all monitoring equipment and appurtenant treatment equipment repairs and/or replacements; (2) address dosing processes for disinfection and pH control; (3) develop and implement a plan to provide alternative drinking water when specific triggers are met; and (4) take additional total coliform bacteria samples under prescribed conditions.

The Order constitutes a final agency action and under Section 1448(a) of the SDWA, 42 U.S.C. § 300j-7(a) you may seek federal judicial review. If you have any questions or wish to discuss this Order, please contact Amanda Driskell at (404) 562-9735 or Driskell.Amanda@epa.gov. For legal inquiries,

please have your attorneys contact Suzanne Armor, Associate Regional Counsel, at (404) 562-9701 or Armor.Suzanne@epa.gov. Thank you for your attention to this matter.

Sincerely,

Carol L. Kemker

Carol L. Kemker
Director
Enforcement and Compliance Assurance Division

Enclosure

cc: Robert K Miller, Director, City of Jackson Department of Public Works
Lester Herrington, Director of Office of Environmental Health,
Mississippi State Department of Health

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4

IN THE MATTER OF:	Docket No. SDWA-04-2020-2300
City of Jackson, Mississippi, Respondent. Public Water System, PWS ID. No. MS0250008.	**EMERGENCY ADMINISTRATIVE ORDER** Proceeding pursuant to Section 1431(a) of the Safe Drinking Water Act, 42 U.S.C. § 300i(a).

I. AUTHORITY

1. This Emergency Administrative Order ("Order") is issued to the City of Jackson, Mississippi ("Respondent") pursuant to the authority vested in the Administrator of the U.S. Environmental Protection Agency Section 1431(a) of the Safe Drinking Water Act ("SDWA"), 42 U.S.C. § 300i(a). The Administrator has delegated this authority to the Regional Administrator of the EPA Region 4, who has, in turn, delegated this authority to the Director of the Enforcement Compliance and Assurance Division.

2. The EPA has jurisdiction to issue emergency orders pursuant to Section 1431 of the SDWA, 42 U.S.C. § 300i.

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW

General Findings

3. Respondent is a municipality created under the laws of the State of Mississippi and is therefore a "person" as that term is defined in the SDWA. 42 U.S.C. § 300f(12); 40 C.F.R. § 141.2.

4. Respondent owns and/or operates a public water system located in the City of Jackson, Mississippi, PWS ID No. MS0250008 ("System"). The System provides water for human consumption to a population of approximately 173,514.

5. The System is a "public water system" within the meaning of Section 1401(4) of the SDWA, 42 U.S.C. § 300f(4); 40 C.F.R. § 141.2.

6. The System regularly serves at least 25 year-round residents and is therefore a "community water system" ("CWS") within the meaning of Section 1401(15) of the SDWA, 42 U.S.C. § 300f(15), and 40 C.F.R. § 141.2.

7. Respondent's ownership and/or operation of the System makes it a "supplier of water" within the meaning of Section 1401(5) of the SDWA, 42 U.S.C. § 300f(5), and 40 C.F.R. § 141.2, and subject to the requirements of Part B of the SDWA, 42 U.S.C. § 300g, and the National Primary Drinking Water Regulations ("NPDWRs") at 40 C.F.R. § 141.

8. Pursuant to SDWA Section 1413, 42 U.S.C. § 300g-2, the Mississippi State Department of Health ("MSDH") has primary responsibility for the implementation and enforcement of the public water supply program in Mississippi.

9. The System consists of two water treatment plants, known as the O.B. Curtis Water Treatment Plant ("O.B. Curtis WTP")[1] and the J.H. Fewell Water Treatment Plant ("J.H. Fewell WTP"),[2] a number of groundwater wells,[3] and appurtenant collection, treatment, storage, and distribution facilities.[4]

10. Portions of the System can be supplied by both ground and surface water sources, while others are served only by surface water sources. The surface water sources are the Ross Barnett Reservoir and the Pearl River. The ground water source is the Sparta Aquifer.

11. The O.B. Curtis and J.H. Fewell WTPs, both of which treat the surface water portions of the System, employ conventional filtration with ultraviolet ("UV") systems to inactivate pathogens. Finished water at the WTPs is disinfected using chloramines.

12. UV disinfection treatment is installed on each individual filter effluent ("IFE") flow at both the O.B. Curtis and J.H. Fewell WTPs to treat for viruses, including *Cryptosporidium* and *Giardia*.

13. Respondent's PWS is required to provide filtration pursuant to 40 C.F.R. §§ 141.73 and 141.173, and disinfection pursuant to 40 C.F.R. §§ 141.72(b) and 141.172.

14. Ground water from the wells is treated at the point of withdrawal using gaseous chlorine.

15. The term "contaminant" means any physical, chemical, biological, or radiological substance or matter in water." 42 U.S.C. § 300f(6).

16. Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (such as whether disease-causing organisms are present). Higher turbidity levels are often associated with higher levels of disease-causing microorganisms.

17. *E. coli*, *Cryptosporidium*, and *Giardia* are contaminants under the meaning of 42 U.S.C. § 300f(6), and are or may be present in the System.

18. On November 22, 2019, the EPA issued a Request for Information to Respondent, pursuant to Section 1445 of the SDWA, 42 U.S.C. § 300j-4, and 40 C.F.R. § 141.31, seeking information to determine Respondent's compliance with federal drinking water regulations.

19. On December 23, 2019, Respondent provided its response to the EPA's Request for Information.

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[1] To the EPA's knowledge and belief, the O.B. Curtis WTP was initially constructed in or around 1992.
[2] To the EPA's knowledge and belief, the J.H. Fewell WTP was initially constructed in or around 1914.
[3] Respondent maintains at least six active groundwater wells (T.V. Road Well, Willo-O-Wood Well, Wiggins Road Well, Siwell Road Well, Highway 18 Well, and Maddox Road Well), along with three inactive groundwater wells (Forest Hill Road Well, Rainey Road Well, and Presidential Hill Well).
[4] Until approximately October 2014, there were two separately identified public drinking water systems owned by the City of Jackson, Mississippi. One was supplied entirely by groundwater and identified under the PWS ID No. MS0250012; the other was supplied by surface water and identified under the PWS ID No. MS0250008.

20. On January 15 and 16, 2020, consistent with the requirements of Section 1445(b)(1), 42 U.S.C. § 300j-4(b)(1), the EPA notified MSDH and Respondent, respectively, of its intent to inspect the PWS.

21. On February 3 to 7, 2020, representatives of the EPA conducted an inspection of the PWS, pursuant to its authority under Section 1445(b)(1) of the SDWA, 42 U.S.C. § 300j-4(b)(1).

Bacterial Contamination and Proper Disinfection

22. During the inspection, the EPA identified the following preliminary concerns related to bacterial contamination and proper disinfection:

    a. The necessary chemical dosing of coagulant to address turbidity is determined by the streaming current detectors ("SCDs"); however, Respondent's SCDs were not properly calibrated at either the O.B. Curtis or J.H. Fewell WTPs, thus failing to provide accurate dosing for proper treatment of drinking water;

    b. Continuous monitoring equipment at the O.B. Curtis WTP has not been repaired or calibrated for approximately three years since the instrument technician position was vacated. This equipment includes pH meters, flow measurement devices, turbidimeters, and the SCDs. Comparisons of operator laboratory bench sheet results indicated that the readouts from the continuous pH meters are off by up to 2 units in some instances. It was indicated on the monthly operating reports submitted in response to the EPA's November 22, 2019 Request for Information, that this equipment was used as the basis for the values reported for compliance.

    c. Jar tests are commonly used in the industry as "bench-scale" simulations of full-scale coagulation/flocculation/sedimentation water treatment processes. Respondent does not follow the industry standard of conducting regular jar tests at both the O.B. Curtis and J.H. Fewell WTPs. Because the SCDs are used as the basis for those coagulant dosing decisions without having been calibrated, the lack of jar testing is an additional indicator in evaluating the ability of the WTPs to deliver safe drinking water to the System's users.

    d. Respondent conducts membrane cleaning cycles without the use of automatic monitoring equipment for pH and chlorine levels. Excess chlorine levels can damage and reduce membrane efficiency. In addition, membrane cleaning is partially dependent on pH, requiring either higher or lower pH cleaning regimes based on the foulants present. This automatic monitoring equipment has been nonfunctional for several years.

    e. Respondent cannot currently perform membrane integrity testing at O.B. Curtis WTP due to wear and breakage of the system components and compressor. This is concerning due to the inability of the Respondent to evaluate the membrane filters' mechanical integrity during times of turbidity exceedance.

    f. Respondent has failed to perform filter maintenance at O.B. Curtis WTP and J.H. Fewell. Considering the recent turbidity exceedances, it is crucial that Respondent maintain the System filters to perform in optimal condition for protection of human health.

    g. NDPWRs require a system's combined filtered water at each plant be less than or equal to 0.3 NTU in at least 95% of the measurements taken each month, and the turbidity level of a

system's combined filtered water at each plant must at no time exceed 1 NTU. Turbidity exceedances were reported at both the O.B. Curtis and J.H. Fewell WTPs in the January 2020 monthly operating report ("MOR"). Finished water turbidity reached 1.35 NTU at the O.B. Curtis WTP and 3.00 NTU at the J.H. Fewell WTP. Additionally, at the O.B. Curtis WTP, 93.5% of turbidity samples were equal to or less than the turbidity limit of 0.3 NTU. The EPA's inspectors observed that the continuous turbidity monitoring equipment at the O.B. Curtis WTP has read inaccurately for approximately three years due to a lack of calibration and maintenance, and that turbidity samples were taken during this time period at a frequency of once per shift, for a total of three times per day. Given that the turbidity monitoring equipment was not operational, the system, to maintain compliance with NDPRWs, should have conducted grab sampling every four hours in lieu of continuous monitoring, but for no more than five working days following the nonoperation of the equipment.

h. UV disinfection devices were found to be offline for significant periods of time at both the O.B. Curtis and J.H. Fewell WTPs. UV disinfection devices are to be operated continuously. In its January 2020 MOR, Respondent reported the following:

i. At the J.H. Fewell WTP:

- UV Reactor 1 was offline for the entire month of January 2020 (and had been offline since October 16, 2019);
- UV Reactor 2 was offline for 15 of 31 days;
- UV Reactor 3 was offline for 17 of 31 days; and
- UV Reactor 4 was offline for 17 of 31 days.

ii. At the O.B. Curtis WTP:

- UV Reactor 1 was offline for two of 31 days;
- UV Reactor 2 was offline for four of 31 days;
- UV Reactor 3 was offline for one of 31 days;
- UV Reactor 4 was offline for three of 31 days; and
- UV Reactor 5 was offline for 10 of 31 days.

23. MSDH provided the EPA with a list of all Boil Water Notices ("BWNs") issued between January 2, 2016 and February 1, 2020, to provide notice to the public of the potential to have serious adverse effects on human health as a result of short-term exposure pursuant to 40 C.F.R. § 141.202. The majority of the BWNs issued were due to loss of pressure from leaks and/or line breaks. Low-pressure and loss of pressure in a drinking water distribution system may cause a net movement of water from outside the pipe to the inside through cracks, breaks, or joints in the distribution system. Crack, breaks and joints are common in all water systems. Backsiphonage occurs when pressure is lost in pipes creating a negative pressure and a partial vacuum that pulls water from a contaminated source outside the pipe into the treated, potable water inside the pipe. This creates a suitable environment for bacteriological contamination and other disease-causing organisms, including *E. coli*, to enter the water distribution system downstream of the WTPs, which is then delivered to users.

24. High levels of turbidity increase the likelihood that drinking water may contain disease-causing organisms, such as *Cryptosporidium*, *Giardia*, *Legionella*, and *E. coli* because particles of turbidity provide shelter for microbes and reduce the microbes' exposure to disinfectants. If particulate material is not removed, a high turbidity event can provide shelter for and promote regrowth of pathogens in the water, leading to an outbreak of waterborne diseases.

25. Pathogens, such as *Giardia*, *Cryptosporidium*, and *Legionella*, are often found in water. If consumed, these pathogens can cause gastrointestinal illness (e.g., diarrhea, vomiting, cramps) and other health problems. These illnesses may be severe and sometimes fatal for people with weakened immune systems. *Cryptosporidium* is a significant concern in drinking water because it is resistant to chlorine and other disinfectants.

26. *E. coli* are bacteria, that when present, indicate the water may have been contaminated with human and/or animal wastes. Human and/or animal wastes may contain pathogens that can cause short-term health impacts, such as diarrhea, cramps, nausea, headaches, or other symptoms. Pathogens may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.

MSDH Actions and the EPA's Coordination with MSDH

27. MSDH has pursued informal enforcement actions against Respondent for Lead and Copper Rule ("LCR") treatment technique violations and Long-Term Enhanced Surface Water Treatment Rule violations due to turbidity exceedances. Additionally, MSDH issued a compliance plan to Respondent on February 12, 2016, to address the LCR violations that occurred starting in June 2015. However, these actions have not been effective in adequately protecting the health of the System's users with respect to the findings above.

28. EPA consulted with the City of Jackson and MSDH, to the extent practicable in light of the imminent endangerment, to confirm the correctness of the information on which this Order is based and to ascertain the action which such authorities were or would be taking.

29. Based on the findings above, the EPA has determined that the System has numerous SDWA violations, including violations of the NPDWRs.

30. Based on the findings above, and despite actions taken by MSDH, the local authorities have not undertaken all actions necessary to protect the public health and conditions exist at the System that may present an imminent and substantial endangerment to the health of persons served by the System. On February 28, 2020, MSDH submitted a written request for the EPA to assist with addressing the System's SDWA noncompliance. Therefore, this Order is necessary to protect human health.

31. The EPA has therefore determined that the actions specified in this Order are necessary to protect the health of persons.

III. ORDER

Based on the foregoing findings and conclusions, and pursuant to Section 1431 of the Act, 42 U.S.C. § 300i, it is ordered:

Intent to Comply

32. Within 72 hours of receipt of this Order, Respondent must notify the EPA in writing of its intent to comply with the terms of this Order. To satisfy this requirement, Respondent shall email the EPA point of contact identified below in Paragraph 44.

Public Notification

33. Effective immediately upon the Effective Date of this Order, Respondent shall carry out the public notice requirements as required by 40 C.F.R. Part 141, Subpart Q for all future violations of NPDWRs. Additionally, Respondent must treat any exceedances of maximum allowable turbidity levels and breaks in water lines or other low pressure or loss of pressure events likely to cause contamination in the System's distribution system as requiring Tier 1 public notification as required by 40 C.F.R. § 141.202 until notified by the EPA that this is no longer necessary.

Treatment and Distribution System Management

34. Notwithstanding the requirements of this Order, Respondent shall continue to implement all applicable monitoring and reporting requirements of the SDWA and NPDWRs in accordance with 40 C.F.R. Part 141.

35. Dosing Process Repair. Within one week of the Effective Date of this Order, Respondent shall fix dosing process for disinfection and pH control.

36. Repair and/or Replacement of Equipment.

    a. Within one week of the Effective Date of this Order, Respondent shall provide to the EPA and MSDH a status of all monitoring equipment and appurtenant treatment equipment (including, but not limited to, pH meters, flow measurement devices, turbidimeters, SCDs, chlorine analyzers, raw water screens, UV reactors, automatic sludge removal system, membrane filtration treatment train flocculator motors, membrane integrity testing system, and filters). This must include, at a minimum, descriptions of the conditions of the equipment, identify in which facility this equipment is located, any needed repairs, and status of calibration.

    b. Within 30 days of the Effective Date of this Order, Respondent shall submit a comprehensive plan, including a schedule of implementation, for the EPA's review and approval, to repair and/or replace monitoring equipment and repair, replace, and/or perform maintenance on the appurtenant treatment equipment to ensure the System has the appropriate treatment equipment and appropriate information to make treatment decisions, and that the water quality is properly measured for compliance with the NPDWRs. All future MORs and weekly data, as required pursuant to Paragraph 43(43.a), shall include the date of last calibration and any repairs and/or replacement of monitoring equipment done since the last report was provided, until further notice by the EPA.

c. Until such time as the monitoring equipment has been repaired and/or replaced and properly maintained, Respondent shall conduct monitoring by collecting grab samples every four hours in lieu of the continuous monitoring. For any instance where grab sampling is conducted in lieu of the required continuous monitoring, Respondent shall identify this deviation in the weekly MORs provided in accordance with Paragraph 43(43.a) of this Order.

37. CFE Turbidity Exceedance Events.

a. In the event of CFE turbidity measurements exceeding 1.0 NTU, Respondent shall implement the following:

i. Comply with all requirements of NPDWRs, including 40 C.F.R. §§ 141.170 – 141.175.

ii. Notify the EPA and MSDH within 24 hours. If cause of the exceedance is known, include this information with notice. However, do not hold or delay the notification in instances where the cause of the exceedance is not known.

iii. Consult with MSDH on the exceedance and the appropriate BWN.

iv. Respondent shall issue a Tier 1 public notice as required by 40 C.F.R. § 141.202.

v. Within 24 hours after the CFE turbidity is less than 0.3 NTU, Respondent shall collect consecutive daily (one sample per calendar day) special purpose samples (bacteriological and microbial) (defined in 40 C.F.R. § 141.21(a)(6)) from the entry point to the distribution system of the treatment plant that had the turbidity exceedance, as well as any other distribution sampling location deemed necessary as identified by MSDH. Respondent shall ensure that each sample is analyzed for total coliform, *E. coli* (if sample is total coliform positive), and chlorine residual.

vi. Provide the EPA with chlorine residual results as measured at the entry point to the System and in the System's distribution for 10 calendar days preceding and following the event.

b. In the event of CFE turbidity measurements exceeding 2.0 NTU, Respondent shall implement the following:

i. Comply with all requirements of NPDWRs, including 40 C.F.R. §§ 141.170 – 141.175.

ii. Immediately issue an appropriate BWN, provide notice and consult with MSDH within 24 hours, and provide notice to the EPA within 24 hours.

iii. Respondent shall issue a Tier 1 public notice as required by 40 C.F.R. § 141.202.

iv. Within 24 hours after the CFE turbidity is less than 0.3 NTU, the System shall collect consecutive daily (one sample per calendar day) special purpose samples (bacteriological and microbial) (defined in 40 C.F.R. § 141.21(a)(6)) from the entry point to the distribution system of the treatment plant that had the turbidity

exceedance as well as any other distribution sampling location deemed necessary, as identified by MSDH. Respondent shall ensure that each sample is analyzed for total coliform, *E. coli* (if sample is total coliform positive), and chlorine residual.

v. Provide the EPA with chlorine residual results as measured at the entry point to the System and in the System's distribution for 10 calendar days preceding and following the event.

vi. Respondent shall provide the EPA and MSDH a self-assessment evaluation of CFE and IFE to include: (1) assessment of filter performance: (2) development of a filter profile; (3) identification and prioritization of factors limiting filter performance; and (4) corrective action plan to address the issue.

38. Low Pressure/Loss of Pressure Events. In the future event that Respondent experiences breaks in water lines or other low pressure or loss of pressure events likely to cause contamination in the System's distribution system, Respondent will take the following actions:

a. Respondent shall consult with MSDH within 24 hours to determine if a BWN is required and provide notification to the EPA within 24 hours.

b. Respondent shall issue a Tier 1 public notice as required by 40 C.F.R. § 141.202.

c. Respondent shall immediately repair the line break or cause of the low pressure/loss of pressure. When satisfied that system pressure will be maintained and there is adequate chlorine residual, Respondent shall begin sampling from the affected area as described below. MSDH typically recommends a free chlorine residual of 0.5 mg/l at the ends of your distribution system.

d. Within 24 hours after making repair(s) to the water line(s) as required above, Respondent shall begin collecting special purpose samples (bacteriological and microbial) (defined in 40 C.F.R. § 141.21(a)(6)) from the System's distribution system. The chart, in Attachment I to this Order, lists the number of samples required based on the number of customers affected. If the entire system is placed on BWN, samples should be collected from sites representing the entire water system. Respondent shall ensure that each sample is analyzed for total coliform, *E.coli* (if the sample is total coliform positive), and chlorine residual. Respondent shall continue sampling until results from two consecutive rounds are total coliform negative.

39. Alternative Water Source Plan Development and Implementation.

a. Within 14 days of the Effective Date of this Order, Respondent shall develop, and submit to the EPA for review and approval, an Alternative Water Source Plan ("AWSP"). In the AWSP, Respondent shall detail how and where it will provide at least one gallon of potable water per day, per person to every person served by the System. This allotment of alternative water must be made available at no cost to every person served by the System, as needed for drinking, cooking, maintaining oral hygiene, and dish washing. The AWSP will also outline how Respondent will inform every person served by the System of when and how an alternative water source is made available. As part of its AWSP, Respondent may opt to provide an alternate water supply that is: (1) provided by a licensed water distributor; (2) purchased bottle water; or (3) provided by another public water system that meets the requirements of

the NPDWRs. *Note*: If the AWSP trigger is localized to a specific portion of the distribution system and the entire system is not impacted, Respondent may opt to only serve alternative water to the portion of the population impacted. In order to consider this approach, the AWSP must include a detailed map of the System.

b. The alternative source of water provided shall meet all applicable SDWA requirements at 40 C.F.R. §141. If bottled water will be used by Respondent as an alternative water in accordance with this Order, Respondent must ensure that the bottled water is certified by the International Bottled Water Association or National Sanitation Foundation International.

c. AWSP Implementation Triggers.

i. If, based upon Respondent's Revised Total Coliform Rule ("RTCR") sampling data collected in accordance with 40 C.F.R. § 141.857 and as outlined in Paragraph 41 below, the PWS exceeds 5.0% total coliform-positive samples in any monthly period during the term of this Order, Respondent shall comply with the "Level 1" assessment requirements of the RTCR at 40 C.F.R. § 141.859(b). In addition, Respondent shall begin implementation of the AWSP within 24 hours of receiving such sampling results. Respondent shall continue implementing the AWSP until the EPA provides written notification to Respondent that AWSP implementation is no longer required; or

ii. Within 24 hours of Respondent's collection of daily special purpose samples required under Paragraphs 37 and 38 above, Respondent shall begin implementation of the AWSP. Respondent shall continue implementing the AWSP until all daily special purpose sample results are total coliform negative. *Note*: The AWSP may consider, in certain situations, that only a portion of the population is impacted by the triggering event and therefore alternative water only needs to be provided to those impacted. See requirements under Paragraph 39(a) above.

Notifications and Reporting

40. Within 72 hours of the Effective Date of this Order, Respondent shall provide the February 2020 MORs, including the IFE data for all conventional filters at both the O.B. Curtis and J.H. Fewell WTPs during this timeframe.

41. Sample Siting Plan.

a. Within one week of the Effective Date of this Order, Respondent shall review its current Sample Siting Plan developed pursuant to 40 C.F.R. § 141.853, to ensure consistency with the RTCR, at 40 C.F.R. Part 141, subpart Y, and simultaneously provide a copy of the current Sample Siting Plan to the EPA for the EPA's concurrent review.

b. If the current Sample Siting Plan does not include a minimum of 120 sampling locations per month as required under 40 C.F.R. § 141.857(b), Respondent shall update the Sample Siting Plan to achieve the required minimum monitoring frequency for the monthly monitoring period after the Effective Date of this Order.

c. Within 10 business days of the Effective Date of this Order, Respondent shall provide to the EPA, RTCR sampling data for the months of January 2020 and February 2020. If the Respondent has not yet conducted the March 2020 sampling, this sampling shall be conducted within one week of the Effective Date of this Order and the results submitted within 10 days of receipt of the sampling analysis. If the March 2020 sampling has been completed prior to the Effective Date of this Order, Respondent shall submit these results along with the January 2020 and February 2020 results. All RTCR sampling data shall include the chlorine residual data for the RTCR locations.

d. The Respondent shall continue to submit the RTCR sampling data to the EPA until directed otherwise. This data shall include all chlorine residual data for all RTCR sampling locations.

42. Respondent must notify the EPA within 24 hours after learning of a violation of this Order or any NPDWRs, or of a situation with the potential to have serious adverse effects on human health as a result of short-term exposure to contaminants.

43. Establishing Regular Contact with the EPA.

a. Immediately upon the Effective Date of this Order and until further notice by the EPA, Respondent shall submit MOR information weekly as follows:

i. Reports must run from Sunday to Saturday each week;

ii. Weekly reports must be submitted to the EPA and MSDH by Tuesday of the following week (e.g., for the monitoring timeframe of Sunday, March 29 through Saturday, April 4, the report must be submitted by Tuesday, April 7).

iii. IFE data must be submitted with each weekly MOR until further notice.

iv. If at any time, the Respondent is notified, by the EPA or MSDH that a revision to the MOR is required, the Respondent shall implement the revision on the following report required unless the EPA or MSDH provides a specific alternate timeline for implementation.

b. Within five business days of the Effective Date of this Order, Respondent shall begin submitting weekly updates to the EPA on Respondent's progress complying with this Order. Respondent shall submit subsequent weekly reports on Tuesday of each subsequent week. Each weekly update shall identify and describe all actions taken in the previous week to meet the requirements of this Order.

c. Within seven business days of the Effective Date of this Order, Respondent shall contact the EPA to set up a mutually agreeable meeting schedule. The purpose of the meetings to be scheduled pursuant to this paragraph are to accomplish the following goals:

i. Provide an opportunity for the Respondent and the EPA to clarify requirements and timelines,

ii. Provide an opportunity for Respondent to report to the EPA any issues, concerns, or problems it faces in complying with the terms of this Order, and

iii. Provide an opportunity for Respondent and the EPA to maintain an open channel of communication wherein new information can be shared.

d. Respondent shall prepare an outline of all the requirements in this Order, how Respondent plans to meet all the requirements of this Order, and submit to the EPA in writing at least 48 hours in advance of the first agreed-upon meeting required under Paragraph 43(c) above. If this falls on a weekend, Respondent shall provide the outline on the last workday before the meeting.

44. Respondent shall send all reports, notifications, documentation and submittals required by this Order in writing or via e-mail to:

U.S. EPA, Region 4
Enforcement and Compliance Assurance Division
Attn: Amanda Driskell
U.S. Environmental Protection Agency
61 Forsyth Street
Atlanta, GA 30303
Email: driskell.amanda@epa.gov

45. All reports, notifications, documentation, and submissions required by this Order must be signed by a duly authorized representative of Respondent and must include the following statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

IV. PARTIES BOUND

46. The provisions of this Order shall apply to and be binding upon Respondent, its officers, employees, agents, successors, and assigns.

V. GENERAL PROVISIONS

47. This Order constitutes final agency action. Under Section 1448(a) of the SDWA, 42 U.S.C. § 300j-7(a), Respondent may seek federal judicial review.

48. The EPA may modify this Order to ensure protection of human health. The EPA will communicate any modification(s) to Respondent in writing and the modification(s) shall be incorporated into this Order.

49. Compliance with the terms and conditions of this Order shall not in any way be construed to relieve Respondent from its obligations to comply with all provisions of federal, state, or local law, nor shall it be construed to be a determination of any issue related to any federal, state or local permit.

Compliance with this Order shall not be a defense to any actions subsequently commenced for any violation of federal laws and regulations administered by the EPA, and it is the responsibility of Respondent to comply with such laws and regulations.

50. Pursuant to SDWA Section 1431(b), 42 U.S.C. § 300i(b), in the event Respondent violates, fails or refuses to comply with any of the terms or provisions of this Order, the EPA may commence a civil action in U.S. District Court to require compliance with this Order and to assess a civil penalty of up to $24,386 per day of violation under the SDWA, as adjusted by the Federal Civil Penalties Inflation Adjustment Act of 1990, amended by the Debt Collection Improvement Act of 1996, and the subsequent Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. § 19.

51. The EPA reserves all rights against Respondent and all other persons to take any further civil, criminal, or administrative enforcement action pursuant to any available legal authority, and to exercise its information gathering and inspection authorities. Nothing in this Order shall preclude the EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional Orders, and/or additional actions as the EPA may deem necessary, and/or from requiring Respondent in the future to perform additional activities pursuant to the SDWA or any other applicable law.

VI. EFFECTIVE DATE

52. Under SDWA Section 1431, 42 U.S.C. § 300i, this Order shall be effective immediately upon Respondent's receipt of this Order. If modifications are made by the EPA to this Order, such modifications will be effective on the date received by Respondent. This Order shall remain in effect until the provisions identified in the Order have been met in accordance with the EPA's written approval.

VII. TERMINATION

53. The provisions of this Order shall be deemed satisfied upon Respondent's receipt of written notice from the EPA that Respondent has demonstrated, to the satisfaction of the EPA, that the terms of this Order have been satisfactorily completed.

FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY:

Carol L. Kemker 3/27/2020

Carol L. Kemker, Director Date

Enforcement and Compliance Assurance Division
Region 4

ATTACHMENT I

Sampling Requirements

# of Connections Affected	# of Samples Required	# of Connections Affected	# of Samples Required
1 – 100	2	4,301 – 5,700	18
101 – 300	3	5,701 – 8,300	20
301 – 500	4	8.301 – 11,000	30
501 – 700	5	11,001 – 13,000	40
701 – 900	6	13,001 – 16,000	50
901 – 1,100	7	16,001 – 19,000	60
1,101 – 1,300	8	19,001 – 23,000	70
1,301 – 1,600	9	23,001 – 27,000	80
1,601 – 2,200	10	27,001 – 32,000	90
2,201 – 2,500	11	32,001 – 43,000	100
2,501 – 2,800	12	43,001 – 73,000	120
2,801 – 4,300	15	73,001 – 107,000	150

Note: Equivalent connections (and population served) will be considered when determining the number of samples which must be collected for a system with a large ratio of population to connections.

Mailing Addresses for the CCs:
Mr. Robert K. Miller, Director
City of Jackson Department of Public Works
200 South President Street
Jackson, Mississippi 39205-0017

William Moody, MSDH
Bureau of Public Water Supply
P.O. Box 1700
2423 North State Street
Jackson, MS 39215-1700

Exhibit 3:

Amendment to 2020 Emergency Administrative Order

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4

IN THE MATTER OF:	)	Docket No. SDWA-04-2020-2300
	)	
City of Jackson, Mississippi,	)	**AMENDMENT TO EMERGENCY ADMINISTRATIVE ORDER**
	)	
Respondent.	)	
	)	
Public Water System, PWS ID. No. MS0250008.	)	Proceeding pursuant to Section 1431(a) of the Safe Drinking Water Act, 42 U.S.C. § 300i(a).
	)	

FIRST AMENDMENT TO EMERGENCY ADMINISTRATIVE ORDER

1. The U.S. Environmental Protection Agency issued an Emergency Administrative Order (Order), effective April 2, 2020, to Respondent, City of Jackson, Mississippi (Respondent).

2. On April 28, 2020, the EPA and Respondent held the first meeting required under Paragraph 43(c) of the Order. During that meeting, Respondent requested clarification regarding the triggering event under Subparagraph 39(c)(ii) for implementation of the Alternative Water Source Plan (AWSP) required under Order.

3. Pursuant to the authority of Section 1431(a) of the Safe Drinking Water Act, 42 U.S.C. § 300i(a), THE DIRECTOR HEREBY ORDERS THAT PARAGRAPH 39(c)(ii) OF THE ORDER BE REMOVED AND REPLACED WITH THE FOLLOWING:

    a. If, based upon Respondent's daily special purpose samples required under Paragraphs 37 and 38 of the Order, the PWS has a total coliform-positive sample the Respondent shall begin implementation of the AWSP within 24 hours of receiving such sampling results. Respondent shall continue implementing the AWSP until all daily special purpose sample results are total coliform negative. *Note*: The AWSP may consider, in certain situations as specified in 39(a), that only a portion of the population is impacted by the triggering event and therefore, alternative water only needs to be provided to those impacted.

4. Except as expressly agreed in the foregoing paragraphs, this First Amendment to the Order does not otherwise affect, alter, or amend the requirements of the Order.

5. This First Amendment to the Order shall become effective upon receipt by the Respondent.

FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY:

CAROL KEMKER

Digitally signed by CAROL KEMKER
Date: 2020.05.28 14:25:12 -04'00'

Carol L. Kemker, Director
Enforcement and Compliance Assurance Division
Region 4

Date

Exhibit 4:

Administrative Compliance Order on Consent

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4

IN THE MATTER OF:	)	Docket No. SDWA-04-2020-2301
	)	
City of Jackson, Mississippi,	)	**ADMINISTRATIVE COMPLIANCE ORDER ON CONSENT**
	)	
Respondent.	)	
	)	Proceeding pursuant to Section 1414(g) of the Safe Drinking Water Act, 42 U.S.C. § 300g-3(g).
Public Water System, PWS ID. No. MS0250008.	)	
	)	

I. STATUTORY AUTHORITY

1. This Administrative Compliance Order on Consent ("AOC") is issued to the City of Jackson, Mississippi ("Respondent" or "City") pursuant to the authority vested in the Administrator of the U.S. Environmental Protection Agency ("EPA") by Section 1414(g) of the Safe Drinking Water Act ("SDWA"), 42 U.S.C. § 300g-3(g). The Administrator has delegated this authority to the Regional Administrator of EPA Region 4, who has, in turn, delegated this authority to the Director of the Enforcement Compliance and Assurance Division.

II. EPA's FINDINGS OF FACT AND CONCLUSIONS OF LAW

2. Respondent is a municipality created under the laws of the State of Mississippi and is therefore a "person" as that term is defined in the SDWA. 42 U.S.C. § 300f(12); 40 C.F.R. § 141.2.

3. Respondent owns and/or operates a public water system located in the City of Jackson, Mississippi, PWS ID No. MS0250008 ("System"). The System provides water for human consumption to a population of approximately 173,514.[1]

4. The System is a "public water system" within the meaning of Section 1401(4) of the SDWA, 42 U.S.C. § 300f(4); 40 C.F.R. § 141.2.

5. The System regularly serves at least 25 year-round residents and is therefore a "community water system" ("CWS") within the meaning of Section 1401(15) of the SDWA, 42 U.S.C. § 300f(15), and 40 C.F.R. § 141.2.

[1] Until approximately October 2014, there were two separately identified public drinking water systems owned by the City. One was supplied entirely by groundwater and identified under the PWS ID No. MS0250012; the other was supplied by surface water and identified under the PWS ID No. MS0250008. In or around October 2014, the City requested the removal of the PWS ID No. MS0250012, as the City intended to stop utilizing the groundwater sourcesas primary sources of drinking water. At the time of the EPA's Civil Investigation ("Investigation"), the EPA identified that the groundwater sources were still being utilized as a primary source for a portion of the distribution and requested that the PWS ID No. MS0250012 be reinstated for the groundwater portion of the system. In or around July 2020, MSDH reinstated the PWS ID No. MS0250012. This Order addresses only those violations alleged to have occurred in the surface water system, PWS ID No.MS0250008.

6. Respondent's ownership and/or operation of the System makes it a "supplier of water" within the meaning of Section 1401(5) of the SDWA, 42 U.S.C. § 300f(5), and 40 C.F.R. § 141.2, and subject to the requirements of Part B of the SDWA, 42 U.S.C. § 300g, the National Primary Drinking Water Regulations ("NPDWRs") at 40 C.F.R. Part 141, and the Mississippi Primary Drinking Water Regulations ("MPDWRs"), promulgated pursuant to the Mississippi Safe Drinking Water Act of 1997 ("MSDWA"), Miss. Code Ann. § 41-26-1 et. seq.

7. Pursuant to SDWA Section 1413, 42 U.S.C. § 300g-2, the Mississippi State Department of Health ("MSDH" or the "State") has primary responsibility for the implementation and enforcement of the public water supply program in Mississippi.

8. Requirements of, or permits issued to Respondent under, the MSDWA and its implementing regulations are "applicable requirements" pursuant to Section 1414(i)(4) of the SDWA, 42 U.S.C. § 300g-3(i)(4), and may therefore be enforced by the EPA under Section 1414(g)(1) of the SDWA, 42 U.S.C. § 300g-3(g)(1).

9. The System consists of two water treatment plants, known as the O.B. Curtis Water Treatment Plant ("O.B. Curtis WTP")[2] and the J.H. Fewell Water Treatment Plant ("J.H. Fewell WTP"),[3] and appurtenant collection, treatment, storage, and distribution facilities.

10. The surface water sources that contribute to the System are the Ross Barnett Reservoir, which serves O. B. Curtis WTP, and the Pearl River, which serves the J. H. Fewell WTP.

11. The O.B. Curtis and J.H. Fewell WTPs employ conventional filtration with ultraviolet ("UV") systems to inactivate pathogens. The O.B. Curtis WTP also employs a membrane filtration system for a portion of the water that goes through this WTP. Finished water at the WTPs is disinfected using chloramines.

12. UV disinfection treatment is installed on each conventional individual filter effluent ("IFE") flow at the O.B. Curtis WTP and on each high service pump at the J.H. Fewell WTP to treat for viruses, including *Cryptosporidium* and *Giardia*. Pursuant to 40 C.F.R. § 141.720(d)(3)(ii), systems must treat at least 95% of the water delivered to the public during each month by UV reactors operating within validated conditions for the required UV dose.

13. The System is required to provide filtration pursuant to 40 C.F.R. §§ 141.73, 141.173, 141.719(b), and 141.720(d); and disinfection pursuant to 40 C.F.R. §§ 141.72(b) and 141.172.

14. The term ''contaminant'' means any physical, chemical, biological, or radiological substance or matter in water." 42 U.S.C. § 300f(6).

15. Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (such as whether disease-causing organisms are present). Higher turbidity levels are often associated with the potential for higher levels of disease-causing microorganisms.

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[2] To the EPA's knowledge and belief, the O.B. Curtis WTP was initially constructed in or around 1992.
[3] To the EPA's knowledge and belief, the J.H. Fewell WTP was initially constructed in or around 1914.

16. Lead, *E. coli*, *Cryptosporidium*, *Giardia*, haloacetic acids (HAA5), and total trihalomethanes (TTHM) are contaminants under the meaning of 42 U.S.C. § 300f(6) and are or may be present in the System.

17. On November 22, 2019, the EPA issued a Request for Information to Respondent, pursuant to Section 1445 of the SDWA, 42 U.S.C. § 300j-4, and 40 C.F.R. § 141.31, seeking information to determine Respondent's compliance with federal drinking water regulations.

18. On December 23, 2019, Respondent provided its response to the EPA's Request for Information.

19. On January 15 and 16, 2020, consistent with the requirements of Section 1445(b)(1), 42 U.S.C. § 300j-4(b)(1), the EPA notified MSDH and Respondent, respectively, of its intent to inspect the System.

20. On February 3 to 7, 2020, representatives of the EPA conducted an Investigation of the System, pursuant to its authority under Section 1445(b)(1) of the SDWA, 42 U.S.C. § 300j-4(b)(1).

21. On March 30, 2020, the EPA transmitted a copy of the Civil Investigation Report to the Respondent, which identified a number of concerns related to bacterial contamination and proper disinfection.

22. Effective April 2, 2020, the EPA issued Respondent an Emergency Administrative Order, Docket No. SDWA-04-2020-2300 ("Emergency Order"), pursuant to Section 1431 of the SDWA, 42 U.S.C. § 300i(a).

23. In the Emergency Order, the EPA found that Respondent had NPDWR violations and that conditions existed within the System that presented an imminent and substantial endangerment to the health of persons served by the System. The NPDWR violations alleged in the Emergency Order included, but were not limited to:

a. At the time of the Investigation, Respondent could not perform membrane integrity testing at O.B. Curtis WTP due to wear and breakage of the system components and compressor, in contravention of 40 C.F.R. § 141.719; and

b. NDPWRs require a system's combined filtered water at each plant be less than or equal to 0.3 NTU in at least 95%of the measurements taken each month, and the turbidity level of a system's combined filtered water at each plant must at no time exceed 1 NTU. Turbidity exceedances were reported at both the O.B. Curtis and J.H. Fewell WTPs in the January 2020 monthly operating report ("MOR"). Finished water turbidity reached 1.35 NTU at the O.B. Curtis WTP and 3.00 NTU at the J.H. Fewell WTP. Additionally, at the O.B. Curtis WTP, 93.5% of turbidity samples were equal to or less than the turbidity limit of 0.3 NTU. At the time of the Investigation, the EPA's inspectors observed that the continuous turbidity monitoring equipment at the O.B. Curtis WTP had read inaccurately for approximately three years due to a lack of calibration and maintenance, and that turbidity samples were taken during that time period at a frequency of once per shift, for a total of three times per day. Given that the turbidity monitoring equipment was not operational, the system, to maintain compliance with NPDWRs, should have

conducted grab sampling every four hours in lieu of continuous monitoring, but for no more than five working days following the nonoperation of the equipment.

24. In order to ensure that the System has appropriate treatment equipment and appropriate information to make treatment decisions, and that the water quality is properly measured for compliance with NPDWRs, the Emergency Order required Respondent to submit a Comprehensive Equipment Repair Plan ("CERP") for the EPA's review and approval, including a schedule of implementation, to repair and/or replace monitoring equipment and repair, replace, and/or perform maintenance on the appurtenant treatment equipment. The Emergency Order also required the Respondent to fix the dosing process for disinfection and pH control; to increase reporting and notice requirements for exceedances of turbidity requirements; provide boil water notices to the public as required under 40 C.F.R. Part 141, Subpart Q, and provide notice thereof to the EPA; develop and implement, after specific triggering events, an Alternative Water Source Plan; provide Revised Total Coliform Rule ("RTCR") sampling data to the EPA; provide the information to be summarized in its monthly operating reports on a weekly basis to the EPA; and provide weekly updates on compliance with the Emergency Order.

25. Although Respondent developed a CERP, the EPA has not approved the CERP as of the Effective Date of this AOC because the parties have not reached mutual agreement on the schedules of implementation for the items included therein. Respondent has reported that some work, including repairs and/or replacement, has been completed or is ongoing. Respondent has not yet fully completed the tasks identified therein, including the repair, replacement and/or maintenance of much of the equipment identified as needing such work.

26. On May 11, 2020 and April 26, 2021, the EPA issued Notices of Noncompliance to Respondent detailing additional violations beyond those previously identified in the Emergency Order. The allegations contained in these Notices of Noncompliance are detailed more fully below, where such alleged noncompliance has not been fully resolved as of the Effective Date of this AOC and/or where the EPA believes additional compliance measures are required at this time to address such noncompliance.

27. Miss. Admin. Code § 15-20-72.2.2.1(5) requires that a certified Class A operator shall be onsite whenever the treatment plant for a Class A public water system treating surface water is in operation. The System is a Class A public water system because it has surface water treatment, groundwater under the direct influence of surface water, lime softening, or coagulation and filtration for the removal of constituents other than iron or manganese. See Miss. Admin. Code § 15-20-72.2.2.1(5).

A review of the City's operating logbooks, provided to the EPA by MSDH on March 11, 2020, and records of discussions between the City, the EPA and MSDH indicate that the System is not always fully covered by a Class A certified operator. Therefore, the Cityis in noncompliance with the MPDWR, Miss. Admin. Code § 15-20-72.2.2.1(5), for failure to maintain certified operators to operate the facilities.

28. 40 C.F.R. § 141.719(b)(3) and Miss. Admin. Code § 15-20-72.1.7.1 require that a PWS must conduct direct integrity testing of membrane units at a frequency of not less than once per day that the membrane unit is in operation to demonstrate removal efficiencies.

During the February 2020 Investigation and upon review of the City's subsequent MORs, the EPA found that the City was unable to perform direct integrity testing of the membrane units at O.B. Curtis WTP on a number of occasions due to wear and breakage of components and/or malfunctioning equipment. Therefore, the City failed to comply with 40 C.F.R. § 141.719(b)(3) and Miss. Admin. Code § 15-20-72.1.7.1.

29. 40 C.F.R. § 141.719(b)(4) and Miss. Admin. Code § 15-20-72.1.7.1 require that a PWS conduct continuous indirect integrity monitoring on each membrane unit unless the system implements continuous direct integrity testing of membrane units in accordance with the criteria in 40 C.F.R. § 141.719 (b)(3)(i) through (v). If indirect integrity monitoring includes turbidity and if the filtrate turbidity readings are above 0.15 nephelometric units ("NTU"), the PWS must immediately perform direct integrity testing on the associated membrane unit in accordance with 40 C.F.R. § 141.719(b)(3). Pursuant to 40 C.F.R. § 141.719(b)(3), the direct integrity testing log removal value ("LRV") for the membrane units at the O.B. Curtis WTP must be greater than or equal to the control limit[4] of 4, or else it is considered to have failed the direct integrity testing and the System must remove the membrane unit from service, conduct a direct integrity test to verify any repairs, and may return the membrane unit to service only if the direct integrity test is within the control limit. See 40 C.F.R. § 141.719(b)(3)(v).

As indicated by a review of the City's MORs, on multiple days between March 2020 and April 2021, the indirect integrity monitoring of the membrane units at the O.B. Curtis WTP showed turbidity readings greater than 0.15 NTU. Subsequent direct integrity testing, when able to be performed, showed failures of several of the membrane units due to LRVs lower than the control limit of 4. As stated in the MORs for these periods, the City did not remove these membrane units from service, as required by 40 C.F.R. § 141.719(b)(3)(v). Therefore, the City failed to comply with 40 C.F.R. §§ 141.719(b)(3)(v) and 141.719(b)(4) and Miss. Admin. Code § 15-20-72.1.7.1.

30. Pursuant to 40 C.F.R. § 141.132(b)(2) and Miss. Admin. Code § 15-20-72.1.3.6, a PWS using chlorine dioxide for disinfection or oxidation must conduct daily monitoring for chlorite.

On February 5, 2020, the EPA observed the System treating with chlorine dioxide at the J.H. Fewell WTP. However, the February 2020 MOR stated that the System did not use chlorine dioxide at the J.H. Fewell WTP on February 5, 2020, nor did the report show that the System conducted the required monitoring on that date for chlorite.[5] Therefore, the City did not conduct daily monitoring and failed to comply with 40 C.F.R. §§ 141.132(b)(2) and Miss. Admin. Code § 15-20-72.1.3.6.

31. Pursuant to 40 C.F.R. § 141.80(c) and Miss. Admin. Code § 15-20-72.1.3.2, the lead action level is exceeded if the concentration of lead in more than 10% of tap water samples collected during any monitoring period conducted in accordance with 40 C.F.R. § 141.86 is greater than 0.015 mg/L, (i.e., if the "90th percentile" lead level is greater than 0.015 milligrams per liter ("mg/L") (or 15 parts per billion ("ppb"))). Under 40 C.F.R. § 141.80(e), any PWS exceeding the lead action level shall implement all applicable source water treatment requirements specified by the State under

[4] Under 40 C.F.R. § 141.719(b)(3)(iv), a System must establish a control limit within the sensitivity limits of the direct integrity test that is indicative of an integral membrane unit capable of meeting the removal credit awarded by the State. This control limit is known as the minimum log removal value and is set by the primary enforcement agency for membrane treatment systems (in this matter, MSDH).

[5] According to the State, Respondent currently has the ability to use chlorine dioxide (ClO_2) for manganese removal at both the J.H. Fewell WTP and O.B. Curtis WTP, but not for disinfection.

40 C.F.R. § 141.83. Pursuant to 40 C.F.R. § 141.83, any PWS exceeding the lead action level must complete source water monitoring and make treatment recommendations to the State within 180 days after the end of the monitoring period during which the lead action level was exceeded. The State then makes a determination regarding source water treatment, and, if necessary, the State may require the PWS to install and operate such treatment.

The System exceeded the lead action level of 0.015 mg/L for the following monitoring periods:January – June 2015; January – June 2016; and July – December 2016. On February 12, 2016, MSDH issued a compliance plan to the City to address the lead action level exceedances ("ALEs"). As a resultof the June 2015 lead ALE, the City conducted an optimal corrosion control treatment ("OCCT") studybetween October 2016 and April 2017 and provided the recommended treatment to MSDH on June 13, 2017. MSDH concurred with the recommended treatment and provided a deadline of May 31, 2019 to complete source water treatment installation. MSDH later extended the completion date to December 2019; yet, the City failed to install OCCT at the J.H. Fewell WTP in accordance with the State's deadline. Therefore, the City failed to comply with 40 C.F.R. §§ 141.80(e) and 141.83 and Miss. Admin. Code § 15-20-72.1.3.2, when it failed to install OCCT and provide applicable source water treatment by the December 2019 deadline. The City subsequently conducted an OCCT study amendment in 2021 and presented its results and recommended source water treatment to MSDH in a February 2021 report. MSDH accepted the results and recommended source water treatment plan on June 4, 2021. Given that the City's report recommended a different source water treatment than identified in its initial 2017 OCCT study, and that MSDH established new deadlines for completion of the source water treatment, the OCCT remains unaddressed at J.H. Fewell WTP as of the Effective Date of this AOC.

32. Pursuant to 40 C.F.R. § 141.82(g) and Miss. Admin. Code § 15-20-72.1.4.3, all systems optimizing corrosion control shall continue to operate and maintain OCCT, including maintaining water quality parameters ("WQPs") at or above minimum values or within ranges designated by the State under 40 C.F.R. § 141.82(f). A water system is out of compliance with the requirements of 40 C.F.R. § 141.82(g) for a six-month period if it has excursions for any State-specified WQP on more than nine days during the period. An excursion occurs whenever the daily value for one or more of the WQPs measured at a sampling location is below the minimum value or outside the range designated by the State. PWSs are required to report any WQP sampling results to the State, pursuant to 40 C.F.R. § 141.90(a). Additionally, PWSs must provide the public notice of treatment technique requirement violations (such as WQP excursions) within 30 days of learning of the violation, pursuant to 40 C.F.R. § 141.203 and Miss. Admin. Code § 15-20-72.1.5.2.

A review of the City's WQP sampling records indicates that the City failed to comply with the lead and copper rule ("LCR") treatment technique requirements for the applicable pH and/or alkalinity WQPs[6] for at least the following monitoring periods:

- January – June 2016 (144 days of excursions of WQPs);
- July – December 2016 (179 days of excursions of WQPs);
- January – June 2017 (183 days of excursions of WQPs);

[6] In its June 4, 2021 acceptance of the OCCT study amendment recommendations, MSDH set interim WQPs for the System, effective July 1, 2021, and final WQPs, to be effective January 1, 2023. The WQPs referenced in this paragraph are the WQPs in place as of June 4, 2021.

- July – December 2017 (186 days of excursions of WQPs);
- January – June 2018 (167 days of excursions of WQPs);
- July – December 2018 (183 days of excursions of WQPs);
- January – June 2019 (89 days of excursions of WQPs);
- July – December 2019 (59 days of excursions of WQPs);
- January – June 2020 (181 days of excursions of WQPs);
- July – December 2020 (63 days of excursions of WQPs); and
- January – June 2021 (42 days of excursions, through April 28, 2021).

According to the State, the City failed to report the WQP violations to the State and did not provide public notification for the following monitoring periods: July – December 2016; January – June 2017; and July – December2017. Therefore, the City failed to comply with 40 C.F.R. §§ 141.82(g), 141.90(a), and 141.203 and Miss. Admin. Code §§ 15-20-72.1.4.3 and 72.1.5.2 for failure to maintain optimal WQPs and provide the appropriate public notification.

33. Pursuant to 40 C.F.R. § 141.723(d) and Miss. Admin. Code § 15-20-72.1.4.1, a PWS must correct any significant deficiencies identified in an EPA- or State-conducted sanitary survey in accordance with EPA- or State-approved schedules.

On November 18, 2016, MSDH conducted a sanitary survey, during which MSDH made a finding of inadequate application of treatment chemicals and techniques. On May 12, 2017, MSDH issued a significant deficiency report citing the System for failure to achieve the target hardness and alkalinity goals [i.e., WQPs], and thereafter issued a compliance plan to the System, requiring improvements to the System be completed by December 29, 2019 to bring the System into compliance.The City failed to complete the required compliance measures at the System by the December 29, 2019 deadline established by the State, and, according to the State, has still not completed these compliance measures as of the Effective Date of this AOC. Therefore, the City is in noncompliance with 40 C.F.R. § 141.723(d)and Miss. Admin. Code § 15-20-72.1.4.1.

34. Pursuant to 40 C.F.R. §§ 141.80(f) and 141.84(a) and Miss. Admin. Code § 15-20-72.1.3.2, a water system that fails to meet the lead action level in tap samples taken pursuant to 40 C.F.R. § 141.86(d)(2), after installing corrosion control and/or source water treatment (whichever sampling occurs later), shall replace lead service lines in accordance with the requirements of 40 C.F.R. § 141.84 and Miss. Admin. Code § 15-20-72.1.1.6(8).

Pursuant to 40 C.F.R. § 141.84(b), a water system shall replace annually at least seven percent (7%) of the initial number of lead service lines in its distribution system. The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins. The system shall identify the initial number of lead service lines in its distribution system, including an identification of the portion(s) owned by the system, based on a materials evaluation, including the evaluation required under § 141.86(a) and legal authorities (e.g., contracts, local ordinances) regarding the portion owned by the system. The first year of lead service line replacement shall begin on the first day following the end of the monitoring period in which the action level was exceeded.

The System exceeded the lead action level of 0.015 mg/L for the following monitoring periods: January – June 2015; January – June 2016; and July – December 2016. Therefore, the City

was required to commence its lead service line replacement program in June 2015. Despite exceeding the lead action level on several occasions, the City has failed to implement a lead service line replacement program at any time from June 2015 to the present.[7] Therefore, the City is in noncompliance with 40 C.F.R. §§ 141.80(f) and 141.84 and Miss. Admin. Code § 15-20-72.1.1.6(8).

35. Pursuant to 40 C.F.R. § 141.86(a)(1) and Miss. Admin. Code § 15-20-72.1.3.2, each water system shall complete a materials evaluation of its distribution system in order to identify a pool of targeted sampling sites that meets the requirements of this section, and which is sufficiently large to ensure that the water system can collect the number of lead and copper tap samples required in 40 C.F.R. § 141.86(c). Systems shall use the information on lead, copper and galvanized steel that it is required to collect under 40 C.F.R. § 141.42(d) when conducting a materials evaluation, including identifying the presence of certain construction materials in the distribution system.

As of the Effective Date of this AOC, Respondent has not provided EPA with a complete materials evaluation, utilizing the information specified in 40 C.F.R. § 141.86(a)(2), to identify potential lead service lines, which was required when the LCR was promulgated in 1991.

36. Pursuant to 40 C.F.R. § 141.64(b)(2) and Miss. Admin. Code 15-20-72.1.2.6, the maximum contaminant level (MCL) for total HAA5 is 60 micrograms per liter (µg/L), determined as a locational running annual average8 (LRAA) at each monitoring location. Systems must include the highest LRAA for HAA5 and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. If more than one location exceeds the HAA5 MCL, the System must include the LRAA for all locations that exceed the MCL.

As stated in a public notice issued by the City to its consumers on March 31, 2021, as required under 40 C.F.R. § 141.629, the City's testing results from 4th Quarter 2020 and 1st Quarter 2021 show that the System exceeded the HAA5 MCL during those periods. The level of HAA5 averaged at one of the System's locations for 4th Quarter 2020 was 66 µg/L, and for 1st Quarter 2021 was 65 µg/L. Therefore, the City is in noncompliance with 40 C.F.R. § 141.64(b)(2) and Miss. Admin. Code 15-20-72.1.2.6.

37. Based on the findings above, the EPA has determined that the System has numerous SDWA violations, including violations of the NPDWRs.

III. AGREEMENT ON CONSENT

Based on the foregoing FINDINGS, and pursuant to the authority of Section 1414(g) of the SDWA, 42 U.S.C. § 300g-3(g), the EPA is issuing this AOC, to place the Respondent on an enforceable schedule to comply with 40 C.F.R. Part 141 and applicable requirements of Miss. Admin. Code. **The EPA hereby ORDERS and Respondent hereby AGREES:**

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[7] Although the City has prepared a draft Lead Service Line Replacement Program Plan for the EPA's approval, a review of the EPA's files and correspondence with the City indicates that the Plan has not been finalized, nor has it been implemented by the City to date.

[8] The locational running annual average is the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. 40 C.F.R. § 141.2.

38. Public Notification. Upon the Effective Date of this AOC, Respondent shall carry out the public notice requirements as required by 40 C.F.R. Part 141, Subpart Q for all future violations of the NPDWRs.

39. Comprehensive Staffing Plan. Within thirty (30) days of the Effective Date of this AOC, Respondent shall provide the EPA with a Comprehensive Staffing Plan. This Plan shall include the staff's primary duty location (i.e., either O.B. Curtis or J.H. Fewell), role(s), and years of experience in that role along with including date of original certification(s). Additionally, Respondent's Plan shall identify how it will ensure that a Class A operator is onsite at all times, including any backup plans in case staff are unavailable.

40. Comprehensive Equipment Repair Plan. The Comprehensive Equipment Repair Plan is incorporated herein as Appendix A, and includes items to be addressed by Respondent. Immediately upon receipt of this AOC, Respondent shall begin implementation of the tasks described in Appendix A in accordance with the schedules of implementation identified therein, including interim milestones, maintenance schedules, and completion deadlines. If, at any time after the Effective Date of this AOC Respondent determines that revisions are required, including extension of timeframes in accordance with Paragraph 50 below, Respondent shall submit a request for revision to the EPA at least ten (10) days prior to implementing any changes explaining why revisions are required and shall not begin implementing such revisions until EPA approval is received. If the EPA determines, during the term of this AOC, that revisions are required, the EPA will notify Respondent in writing of such revisions and Respondent shall submit such revisions to the EPA within thirty (30) days of receipt of the EPA's determination and shall implement such revisions in accordance with the EPA's approval and any associated schedule. Once a task is completed, Respondent shall submit documentation demonstrating completion. Documentation may include, but is not limited to, state concurrence, a contractor work completion acknowledgement, or another document approved by EPA.

41. Asset Management Plan Development and Implementation.

a. Within sixty (60) days of the Effective Date of this AOC, Respondent shall provide a scope of work for the EPA's review and approval for development of an Asset Management Plan. The Asset Management Plan shall include detailed asset inventories (including, at minimum, age, condition, and criticality), operation and maintenance tasks, and long-range financial planning. The scope of work shall include interim milestones and timeframes for completion of the Asset Management Plan. Completion of the Asset Management Plan shall be accomplished within nine (9) months of the EPA's approval of the scope of work. The Asset Management Plan must include an evaluation of all Respondent's assets to facilitate effective and efficient system-wide operational sustainability. See the attached, "*Asset Management: A Best Practices Guide*," for guidance on this topic.[9] The Asset Management Plan must be developed by a qualified entity, and Respondent shall include in its scope of work a description of the entity that will develop the Plan. See the attached, "*Building an Asset Management Team*,"[10] for

[9] Additional resources on Asset Management can be found at the following EPA website: https://www.epa.gov/sustainable-water-infrastructure/asset-management-water-and-wastewater-utilities. These resources are provided for informational purposes, and do not constitute regulatory requirements.
[10] Available at https://nepis.epa.gov/Exe/ZyPDF.cgi/P1000LTZ.PDF?Dockey=P1000LTZ.PDF.

guidance on this topic. Interim milestones and timeframes contained in the approved scope of work will be enforceable pursuant to this AOC.

b. The Asset Management Plan shall be submitted to EPA for review and approval in accordance with the timeframes contained in the above referenced scope of work. Upon the EPA's approval of the Asset Management Plan, the Plan shall become an enforceable requirement of this AOC. Respondent shall begin implementation of the Asset Management Plan immediately upon receipt of EPA's approval.

42. LCR Corrosion Control Treatment. Within seven (7) days the Effective Date of this AOC, Respondent shall submit to the EPA, for review and approval, a copy of the OCCT Study Amendment report. A proposed treatment plan shall be submitted as outlined in Appendix A, Item 40. Until EPA concurrence is received on the proposed treatment plan, Respondent shall make any revisions as requested by the EPA. Upon receipt of the EPA's concurrence on the proposed treatment plan, the plan will become an enforceable component of this AOC.

43. LCR Materials Evaluation and Lead Service Line Replacement.

a. Within thirty (30) days of the Effective Date of this AOC, Respondent shall submit to the EPA for review and approval a plan for development of an updated materials evaluation which complies with the requirements of 40 C.F.R. § 141.86 and Miss. Admin. Code § 15-20-72, and shall submit the completed materials evaluation within six (6) months of EPA's approval of the materials evaluation plan.

b. Within thirty (30) days of the completed materials evaluation, Respondent shall develop and provide to the EPA for review and concurrence an updated Lead Service Line Replacement Program Plan ("LSLRPP") that identifies timeframes for implementing the identified activities and addresses EPA's comments. The LSLRPP shall include how Respondent will address current inventory and future inventory; how Respondent plans to begin replacement as required by 40 C.F.R. § 141.84; and how the information gathered through the evaluation steps will be utilized to update the materials evaluation and sample siting plans, as necessary.

c. Within fifteen (15) days of receipt of the EPA's concurrence on the revised LSLRPP, Respondent shall begin implementation of the LSLRPP. This shall continue, at a minimum, until such time as Optimal Corrosion Control has been installed and is determined to be effective based on follow-up sampling.

44. Stage 2 Disinfection Byproducts Requirements.

a. Respondent shall conduct monitoring quarterly for TTHM and HAA5 in accordance with 40 C.F.R. § 141.621(a) and its state approved monitoring plan. Samples shall be analyzed in accordance with 40 C.F.R. § 141.621(b). Respondent shall calculate the LRAAs for TTHM and HAA5 using monitoring results collected, in accordance with 40 C.F.R. § 141.620(d). Specifically, Respondent must calculate compliance with the MCL based on the available data from the most recent four

quarters.

b. Within thirty (30) days of the Effective Date of this AOC, Respondent shall submit documentation that all public notice requirements specified in 40 C.F.R. Part 141, Subpart Q have been completed for the DBP MCL violations noted in this AOC. Thereafter, Respondent must continue to repeat public notice quarterly until the violations have been resolved.

c. Respondent shall submit to the EPA, in addition to routine reporting to MSDH, the results of the monitoring required pursuant to 40 C.F.R. § 141.621 by the 10th day of the month following the end of the calendar quarter within which the sample was collected in accordance with 40 C.F.R. § 141.629. Respondent shall report quarterly to the EPA until directed otherwise.

45. Reporting and Notification.

a. Effective immediately upon the Effective Date of this AOC and until further notice by the EPA, or termination of this AOC pursuant to Section IV, whichever comes first, Respondent shall submit MOR information weekly as follows:

i. Reports must run from Sunday to Saturday each week;

ii. Weekly reports must be submitted to the EPA by Tuesday ofthe following week (*e.g.*, for the monitoring timeframe of Sunday, July 5through Saturday, July 11, the report must be submitted by Tuesday, July14).

iii. Respondent shall report the MOR in the formatting requested by the EPA.

b. Respondent shall continue to submit the WQP sampling data to the EPA for a period of twelve (12) months following the Effective Date of this AOC, which may be extended by the EPA if data indicates noncompliance or if submission of such data is not timely or complete at any time during this twelve (12)-month period. The data shall be reported as follows:

i. WQP results for the entry points to the distribution system sampling shall be included with the weekly MOR submittals.

ii. WQP results for the tap sampling shall be submitted within fifteen (15) days of the end of each month (e.g., for the monitoring timeframe of July 1 through July 31, the results must be submitted by August 15, 2021).

c. Effective immediately upon the Effective Date of this AOC and until further notice by the EPA or Termination of this AOC pursuant to Section IV, whichever comes first, if and when Respondent uses chlorine dioxide for disinfection or oxidation at either J.H. Fewell WTP or O.B. Curtis WTP, Respondent shall conduct daily monitoring for chlorite on each such day. Respondent shall include chlorite

monitoring data on a weekly basis with its MOR information, as required under Paragraph 45(a) above.

d. Effective immediately upon the Effective Date of this AOC and until further notice by the EPA, or termination of this AOC pursuant to Section IV, whichever comes first, Respondent shall submit weekly updates to the EPA as follows:

i. Weekly updates shall include the Respondent's progress in complying with this AOC and identify any failures to comply with the AOC as wellas any violations that occurred during the previous week.

ii. Reports must run from Sunday to Saturday each week;

iii. Weekly updates shall be submitted with the weekly MORs to the EPA by Tuesday of the following week (e.g., for the monitoring timeframe of July 1 through July 31, the results must be submitted by August 3, 2021).

iv. Weekly updates shall follow the format provided by the EPA and besubmitted electronically.

e. Respondent shall send all reports, notifications, documentation and submittals required by this AOC in writing via e-mail to:

U.S. EPA, Region 4
Enforcement and Compliance Assurance Division
Attn: Amanda Driskell
Email: driskell.amanda@epa.gov

AND

U.S. EPA, Region 4
Enforcement and Compliance Assurance Division
Attn: Bryan Myers
Email: myers.bryan@epa.gov

f. All reports, notifications, documentation, and submissions required by this AOC must be signed by a duly authorized representative of the Respondent and must include the following statement:

"I certify under penalty of law that this document and all attachments wereprepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate theinformation submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge andbelief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the

possibility of fine and imprisonment for knowing violations."

IV. FINAL REPORT AND TERMINATION OF AOC

46. Within thirty (30) calendar days after Respondent has fully completed and implemented the actions required by Section III (Agreement on Consent) of this AOC, including work outlined in the CERP, Respondent shall submit for the EPA's review and approval a final report (Final Report) that includes: (a) a description of all of the actions which have been taken toward achieving compliance with this AOC; (b) an assessment of the effectiveness of such actions; and (c) an analysis of whether additional actions beyond the scope of this AOC are necessary to further comply with the SDWA and this AOC.

47. If the EPA determines, after review of the Final Report, that all the requirements of this AOC have been completed and implemented in accordance with this AOC and no further actions are necessary to comply with the SDWA, the EPA will provide notice to Respondent and this AOC shall be deemed terminated.

48. If the EPA determines, after review of the Final Report, that, despite all the requirements of this AOC having been completed and implemented in accordance with this AOC, further actions are necessary to comply with the SDWA, the NPDWRs, and the MPDWRs, the Parties agree that this AOC may be amended to reflect such necessary additional actions. Such amendment must be agreed to in writing to become effective under this AOC.

49. If the EPA determines that any requirement has not been completed and implemented in accordance with this AOC, the EPA will notify the Respondent, provide a list of deficiencies, and may require Respondent to modify its actions as appropriate in order to correct such deficiencies. If so required, Respondent shall implement the modified and approved requirement(s) and submit a modified Final Report in accordance with the EPA notice. Failure by Respondent to implement any of the approved modified requirement(s) shall be a violation of this AOC.

50. Notwithstanding the provisions above, the EPA may extend any timeframe contained in this AOC (including, but not limited to, Appendix A) upon a showing of good cause as to why such timeframe (interim or final) cannot be achieved. Such extensions of time to the tasks in Appendix A shall be in writing, but may be incorporated into a revision to Appendix A and not necessarily in a revision or amendment to this AOC.

V. GENERAL PROVISIONS

51. Nothing in this AOC shall constitute a waiver, suspension, or modification of SDWA, the MSDWA, their respective implementing regulations, or terms and conditions of any permit issued thereunder to Respondent, which remain in full force and effect.

52. Failure to comply with the requirements herein shall constitute a violation of this AOC and the SDWA, and may subject the Respondent to penalties as provided in Section

1414(g)(3) of the SDWA, 42 U.S.C. § 300g-3(g)(3), as amended by the Federal Civil Penalties Inflation Adjustment Act of 1990, as amended, and as codified by the EPA at 40 C.F.R. Part 19.

53. Respondent's compliance with this AOC does not necessarily constitute compliance with the provisions of the SDWA, 42 U.S.C. § 300f et seq.; the MSDWA, Miss. Code Ann. § 41-26-1 et. seq.; or their respective implementing regulations.

54. Any sampling done to comply with the terms of this AOC shall be done in a manner consistent with EPA approved methodologies. The EPA reserves the right to require Respondent to conduct additional sampling if the EPA determines that Respondent's sampling is not being conducted in accordance with EPA-approved methodologies.

55. This AOC addresses only those violations alleged herein. Nothing in this AOC shall be construed as relieving the Respondent of its obligation to comply with all applicable provisions of federal, state, or local law, nor shall it be construed to be a ruling on, or determination of, any issue related to any other federal, state, or local permit. Compliance with this AOC shall not be a defense to any actions subsequently commenced pursuant to federal laws and regulations administered by the EPA.

56. Issuance of this AOC shall not be deemed as prohibiting, altering, or in any way limiting the ability of the EPA to pursue any other enforcement actions available to it under law. Such actions may include, without limitation, any administrative, civil, or criminal action to seek penalties, fines, injunctive, or other appropriate relief, or to initiate an action for imminent and substantial endangerment under the SDWA or any other federal or state statute, regulation, or permit.

57. The EPA reserves all rights and remedies, legal and equitable, available to enforce any violation cited in this AOC and to enforce this AOC.

58. Nothing in this AOC is intended to nor shall be construed to operate in any way to resolve any criminal liability of Respondent, or other liability resulting from violations that were not alleged in this AOC.

59. This AOC applies to and is binding upon Respondent and its officers, directors, employees, agents, successors, and assigns.

60. Any change in the legal status of Respondent, including but not limited to any transfer of assets of real or personal property, shall not alter Respondent's responsibilities under this AOC.

61. Respondent admits to the jurisdictional allegations set forth within this AOC.

62. Respondent neither admits nor denies the factual allegations set forth within this AOC.

63. Respondent waives any and all claims for relief and otherwise available rights or remedies to judicial or administrative review which Respondent may have with respect to any issue

of fact or law set forth in this AOC, including, but not limited to any right of judicial review of the AOC under the Administrative Procedure Act, 5 U.S.C. §§ 701-706.

64. Each party shall bear its own costs and attorneys' fees in connection with the action resolved by this AOC.

65. Pursuant to Section 1414(g)(2) of the SDWA, 42 U.S.C. § 300g-3(g)(2), the EPA has conferred with and sent a copy of this AOC to the State of Mississippi.

66. Each undersigned representative of the parties to this AOC certifies that he or she is fully authorized to enter the terms and conditions of this AOC and to execute and legally bind that party to it.

VI. EFFECTIVE DATE

67. This AOC shall become effective on the date on which Respondent receives a fully executed copy of this AOC, after signature by the Director, EPA Region 4 Enforcement and Compliance Assurance Division.

VII. MULTIPLE COUNTERPARTS

68. This AOC may be executed in counterparts, each of which shall be deemed to be an original but all of which taken together shall constitute one and the same agreement.

FOR THE RESPONDENT:

6/30/2021
Date

Chokwe Antar Lumumba, Mayor
City of Jackson, Mississippi

SO ORDERED this _____ day of 7/1/21, 20____.

CAROL KEMKER Digitally signed by CAROL KEMKER Date: 2021.07.01 10:07:19 -04'00'

Carol L. Kemker, Director
Enforcement and Compliance Assurance Division
Region 4

APPENDIX A
Comprehensive Equipment Repair Plan (CERP) Schedule of Implementation

APPENDIX A
Comprehensive Equipment Repair Plan (CERP) Schedule of Implementation

Task#	Plant and/or Category	Task	Deadline or Timeframe
General Tasks			
1	Operator/Staffing	City will hire an Instrument Technician for O.B. Curtis	Within 3 months of order effective date.
2	Operator/Staffing	2. Provide documentation of completion or 2.A. Submit documentation of funding for an additional two (2) operators for O.B. Curtis. 2.B.City will hire 2 unlicensed operators for O.B. Curtis in FY2020-21.	2. Within 1 month of order effective date. or 2.A and 2.B Within 6 months of order effective date.
3	Operator/Staffing	Both operations new hires should be eligible for licensure and must complete testing for Class A Waterworks	Within 7 months of order effective date.
Fewell			
4	Clari-Trac	Clari-Trac System shall be functioning and operational and repairs completed for all Basins including Butterfly Valves, Actuators, Drives, and Vacuum Hoses.4. Provide documentation of completion or 4.A. Contact Manufacturer and identify necessary work/schedule and submit Scope of Work* to EPA; 4.B. Clari-Trac system shall be fully functional and operational with all repairs completed	4. Within 1 month of order effective date. or 4.A. Within 30 days of order effective date 4.B. Within 6 months of order effective date
5	UV Reactors	UV Sensors - Functional and fully operational. 5. Provide documentation of completion or 5.A. Order parts identified on the parts list provided by the Technician report from the 1/19/2021 evaluation. Provide the Technician Report/parts list and date parts were ordered to EPA. 5.B. Return all UV Sensors to fully functional/operational status.	5. Within 1 month of order effective date. or 5.A. Within 30 days of order effective date 5.B. Within 6 months of order effective date
6	Filters	6.COJ will develop a Scope of Work* with timeframes for returning filters to fully operational and functional status. Upon EPA approval of Scope of Work/plan, the CERP will be updated to include the individual tasks and timeframes.	Within 60 days of order effective date
7	Monitoring Equip	7.A. Flow Measurement Devices - Research and assessment completed 7.B Flow Measurement Devices -will be functional and fully operational.	7.A. Within 30 days of order effective date 7.B. Within 6 months of order effective date

APPENDIX A Comprehensive Equipment Repair Plan (CERP) Schedule of Implementation			
Task#	**Plant and/or Category**	**Task**	**Deadline or Timeframe**
8	Monitoring Equip	8. Provide documentation of completion or 8.A. Submit a status report for all turbidimeters, to include current status (operational or not) and what repairs/replacement is needed for each item. 8.B. Return all to fully operational status.	8. Within 1 month of order effective date. or 8.A. Within 30 days of order effective date 8.B. Within 3 months of order effective date
9	Intake Structure	Pedestrian Bridge	Within 6 months of order effective date
10	Entire Plant	Corrosion Control report	Within 30 days of order effective date
Curtis			
11	Conventional - Chlorine Room	Weight Indicator - 11.A Parts ordered 11.B Functional and fully operational.	11.A. Within 30 days of order effective date 11.B. Within 90 days of order effective date
12	Conventional - Chlorine Room	HS#1 - Documentation showing functioning and operational.	Within 30 days of order effective date
13	Conventional - All Conventional Basins	Clari-Trac System shall be functioning and operational and repairs completed for all Basins including Butterfly Valves, Actuators, Drives, and Vacuum Hoses. 13.A. Contact Manufacturer and identify necessary work/schedule and submit Scope of Work to EPA*; 13.B. Clari-Trac system shall be fully functional and operational with all repairs completed	13.A. Within 30 days of order effective date 13.B. Within 7 months of order effective date
14	Conventional - Turbidimeters for Basis 1, 2, 3	14. Provide documentation of completion or 14.A. Submit a status report for all turbidimeters, to include current status (operational or not) and what repairs/replacement is needed for each item. 14.B. Return all to fully operational status.	14. Within 1 month of order effective date. or 14.A. Within 30 days of order effective date 14.B. Within 3 months of order effective date
15	Conventional - UV Filter Gallery	UV #5 - Operational and Fully functional	Within 30 days of order effective date
16	Membrane - HS#2	Chlorine analyzers - Operational and Fully functional. Provide documentation of replacement of one chlorine analyzer and installationof second chlorine analyzer	Within 1 month of order effective date.
17	Membrane - Blower Room	Blower C - 17. Provide documentation of completion or 17.A Assessment of root cause completed 17.B Submit plan to address the concerns identified in assessment. Upon EPA approval of the plan, Appendix A will be updated to include those individual tasks and timeframes	17. Within 1 month of order effective date. or 17.A. Within 30 days of order effective date 17.B. Within 60 days of order effective date
18	Conventional-Intake	Microscreens -18. Provide documentation of completion or 18.A. Submit status report for the microscreens, include current status and any needed repairs/replacement; 18.B. Complete any needed repairs/replacement	18. Within 1 month of order effective date. or 18.A. Within 30 days of order effective date 18.B. Within 60 days of order effective date
19	Conventional-Intake	60-inch sluice gate - 19. Provide documentation of completion or 19.A. Submit status report, include current status and any needed repairs/replacement; 19.B. Complete any needed repairs/replacement	19. Within 1 month of order effective date. or 19.A. Within 30 days of order effective date 19.B. Within 60 days of order effective date

APPENDIX A
Comprehensive Equipment Repair Plan (CERP) Schedule of Implementation

Task#	Plant and/or Category	Task	Deadline or Timeframe
20	Conventional-Intake	72-inch sluice gate - 20. Provide documentation of completion or 20.A. Submit status report, include current status and any needed repairs/replacement; 20.B. Complete any needed repairs/replacement	20. Within 1 month of order effective date. or 20.A. Within 30 days of order effective date 20.B. Within 60 days of order effective date
21	Both - Intake	Roof Repairs/Potassium Permanganate feeder	Within 3 months of order effective date.
22	Membrane - Intake	Microscreens -22. Provide documentation of completion or 22.A. Submit status report for the microscreens, include current status and any needed repairs/replacement; 22.B. Complete any needed repairs/replacement	22. Within 1 month of order effective date. or 22.A. Within 30 days of order effective date 22.B. Within 60 days of order effective date
23	Membrane - Intake	60-inch sluice gate - 23. Provide documentation of completion or 23.A. Submit status report, include current status and any needed repairs/replacement; 23.B. Complete any needed repairs/replacement	23. Within 1 month of order effective date. or 23.A. Within 30 days of order effective date 23.B. Within 60 days of order effective date
24	Membrane - Sludge Plant Handling Facility	Gravity Thickener #1 and #2 - Functional and Fully Operational	Within 5 months of order effective date.
25	Both - Filters	Filter Rehab - Submit detailed Scope of Work*. Upon approval of the Scope of Work, the tasks will be updated to include additional milestones and final completion of this task.	Within 60 days of order effective date
26	Membrane - Trains #1-6	26.A. Submit a report on the current status and any needed repairs/replacement for each membrane train and its components including sluice gate, flocculator, centrifuge, reject valve, turbidimeter and rapid mixer. 26.B. Submit detailed Scope of Work* to address the identified concerns, including any sequencing. Upon approval of the Scope of Work, the tasks will be updated to include additional milestones and final completion of this task.	26.A. Within 30 days of order effective date 26.B. Within 60 days of order effective date
27	Membrane - Cover	Complete Membrane Basin Building Structure Project.	Within 6 months of order effective date
28	Conventional - Soda Ash System	dilution system - - Functional and Fully Operational - Provide documentation of completion or repair the dry powder level indicators	Within 30 days of order effective date
Groundwater System-Storage Tank			
29	Storage Tanks	Maddox Rd (Hwy 18) - Provide documentation that tank is fully functioning and operational.	Within 30 days of order effective date
30	Storage Tanks	TV Rd Booster Station - Submit plan for bringing back into service.	Within 6 months of order effective date

APPENDIX A
Comprehensive Equipment Repair Plan (CERP) Schedule of Implementation

Task#	Plant and/or Category	Task	Deadline or Timeframe
31	Wells	Provide a status and plan for each of the wells, include a status of each well, identify any need repairs/replacement, and propose timeframe for addressing these repairs/replacement including any interim steps. Upon EPA approval of the plan, Appendix A will be updated to include those individual tasks and timeframes for each well.	Within 60 days of order effective date
32	Well House	Well Houses - Submit Scope of Work* including proposed timeframes. Upon EPA approval of the Scope of Work, Appendix A will be updated to include those individual tasks and timeframes.	Within 60 days of order effective date
Dosing Automation			
33	Curtis	O.B. Curtis: Submit detailed Scope of Work*, that includes schedule of tasks and timeframes for completion of interim and final tasks. Upon approval of the Scope of Work, Appendix A will be amended to add additional tasks/timeframes for completion of automation.	Within 60 days of order effective date
34	Curtis	Ammonia/Chlorine Feeds: All chlorinator and ammoniator equipment and appurtenances will be fully functional with automatic, flow-pacing capabilities in service and redundancy present. Submit detailed Scope of Work*, that includes schedule of tasks and timeframes for completion of interim and final tasks. Upon approval of the Scope of Work, Appendix A will be amended to add additional tasks/timeframes for completion of automation.	Within 60 days of order effective date

APPENDIX A
Comprehensive Equipment Repair Plan (CERP) Schedule of Implementation

Task#	Plant and/or Category	Task	Deadline or Timeframe
35	Curtis	ACH (Aluminum Chlorohydrate) (coagulant): The treatment system was installed by using the same method as the Alum/lime system that was previously being used and not tweaked for the new ACH coagulant. Studying the coagulation system to determine if CO2 treatment addition will be helpful in improving the treatment system for future automation. Submit detailed Scope of Work*, that includes schedule of tasks and timeframes for completion of interim and final tasks. Upon approval of the Scope of Work, Appendix A will be amended to add additional tasks/timeframes for completion of automation.	Within 60 days of order effective date
36	Curtis	O.B. Curtis: Potassium Permanganate Feeds: flow pacing or feedback loop. Submit detailed Scope of Work*, that includes schedule of tasks and timeframes for completion of interim and final tasks. Upon approval of the Scope of Work, Appendix A will be amended to add additional tasks/timeframes for completion of automation.	Within 60 days of order effective date
37	Curtis	O.B. Curtis: Fluoride - Submit detailed Scope of Work*, that includes schedule of tasks and timeframes for completion of interim and final tasks. Upon approval of the Scope of Work, Appendix A will be amended to add additional tasks/timeframes for completion of automation.	Within 60 days of order effective date
38	Curtis	O.B. Curtis: pH metering information: Replaced/Repaired and are being calibrated as required. Information from the meters is not fed directly into the chemical feeding systems, but manually by operators. This can result in missing peaks. Submit detailed Scope of Work*, that includes schedule of tasks and timeframes for completion of interim and final tasks. Upon approval of the Scope of Work, Appendix A will be amended to add additional tasks/timeframes for completion of automation.	Within 60 days of order effective date

APPENDIX A
Comprehensive Equipment Repair Plan (CERP) Schedule of Implementation

Task#	Plant and/or Category	Task	Deadline or Timeframe
39	Curtis	O.B Curtis: Raw Water Flow Meter - Conventional plant (related to the Clari-Trac System): Not currently running automatically. Submit detailed Scope of Work*, that includes schedule of tasks and timeframes for completion of interim and final tasks. Upon approval of the Scope of Work, Appendix A will be amended to add additional tasks/timeframes for completion of automation.	Within 60 days of order effective date
40	Fewell	The dosing equipment has always been run in manual for disinfection and pH at the Fewell plant. 40.A. Submit a plan to complete research/assessment; 40.B. Based on research,submit work proposal, which should include a proposed treatment plan; 40.C. Complete work.	Task 40.A will be due one month after approval of OCCT Study Findings Plan and Task 40.B will be due two months after approval. Upon approval, Appendix A will be updated to include completion timeframe for Task40.C A proposed treatment plan shall include a scope of work, timeframes for completion of any necessary treatment modifications, and identify funding for implementation of the treatment plan.

*The Scope of Work (SOW) submitted to the EPA must contain detailed descriptions of all work necessary to successfully complete the Task listed in this AOC. The SOW must include all interim steps, including completion dates and/or timeframes to complete each interim step. In addition to completion dates/timeframes for each interim step, the SOW must also contain the deadline (date) for the completion of the entire Task. Scope of Works may be combined if tasks will all be a part of same project.

The EPA understands that the City may not be able to provide exact completion dates due to the complex nature of some Tasks included in the AOC. If the City is unable to project exact dates of completion for each interim step necessary to complete a Task, the City must, at a minimum, describe the interim steps necessary to complete each Task, along with timeframes that the City reasonably expects to be necessary for each interim step to be completed. For example, if the City has a requirement to submit and receive approval of a "Plans and Specs" document to the MSDH as an interim step, the SOW could include a statement similar to, "The City will submit "Plans and Specs" document for review and approval to the MSDH. Within two (2) weeks of MSDH approval of "Plans and Specs" document, the City will put the work out for bid."

This level of detail must be provided for each interim step necessary to complete each Task identified in the AOC. Without specific, detailed SOWs, including interim steps and completion dates or timeframes for completion, the EPA is unable to adequately review and approve the SOW proposed bythe City.

Exhibit 5:
Notice of Noncompliance
Effective May 11, 2020

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAY 11, 2020

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

The Honorable Chokwe A. Lumumba
Mayor of City of Jackson
219 South President Street
Jackson, Mississippi 39205

Re: Notice of Noncompliance Pursuant to Section 1414(a)(1)(A) of the Safe Drinking Water Act, 42 U.S.C. § 300g-3(a)(1)(A), City of Jackson Public Water System, Jackson, Mississippi, PWS ID No. MS0250008

Dear Mayor Lumumba:

The U.S. Environmental Protection Agency is responsible for assuring public water systems provide safe drinking water in accordance with the Safe Drinking Water Act (SDWA), 42 U.S.C. § 300f et. seq., and the regulations promulgated thereunder. Based on information contained in the Safe Drinking Water Information System (SDWIS), the City of Jackson Public Water System (System) has approximately 71,486 service connections, serves approximately 173,514 persons, and is owned and/or operated by the City of Jackson, Mississippi (hereinafter, the City). Pursuant to Section 1401(15) of the SDWA, 42 U.S.C. § 300f(15), it is therefore a community water system. As a community water system, the Jackson Public Water System (PWS) is subject to the requirements of the National Primary Drinking Water Regulations (NPDWR), 40 C.F.R. Part 141, and the Mississippi Primary Drinking Water Regulations (MPDWR), promulgated pursuant to the Mississippi Safe Drinking Water Act of 1997, Miss. Code Ann. § 46-21-1 et. seq.

Based on information provided by the City in response to the EPA's information request issued on November 22, 2019 pursuant to its authority under Section 1445 of the SDWA, 42 U.S.C. § 300j-4 and 40 C.F.R. § 141.31; information collected during the EPA's Inspection of the System conducted during the week of February 3, 2020; information provided to the EPA from the Mississippi Department of Health (MSDH)[1]; information provided by the System's Monthly Operating Reports (MORs); and information contained in SDWIS, the EPA finds that the System is in noncompliance with the SDWA, the NPDWR, and the MPDWR, as described below.[2] Consistent with Executive Order No. 13892, "Promoting the Rule of Law Through Transparency and Fairness in Civil Administrative Enforcement and Adjudication" (Oct. 9, 2019), the EPA provided the City with advance notice of and an opportunity to discuss these violations during a meeting between the EPA and the City on April 28, 2020.

[1] The MSDH is the entity in the State of Mississippi with primary enforcement authority over the SDWA, pursuant to SDWA Section 1413, 42 U.S.C. § 300g-2. On February 28, 2020, MSDH sent a written request for EPA to assist in addressing the City of Jackson's SDWA noncompliance.

[2] The violations contained herein are in addition to those violations alleged in the Emergency Administrative Order, Docket No. SDWA-04-2020-2300, issued by the EPA to the City on March 27, 2020 (Enclosure A).

1. Miss. Admin. Code § 15-20-72.2.2.1(5) requires a certified Class A operator shall be onsite whenever the treatment plant for a Class A public water system treating surface water is in operation. The System is a Class A public water system, because it has surface water treatment, groundwater under the direct influence of surface water, lime softening, or coagulation and filtration for the removal of constituents other than iron or manganese. See Miss. Code Ann. § 15-20-72.2.2.1(5).

   A review of the City's operating logbooks, provided to the EPA by MSDH on March 11, 2020, indicated that the System is not always fully covered by a Class A certified operator. Therefore, the City is in noncompliance with the MPDWR, Miss. Admin. Code § 15-20-72.2.2.1(5), for failure to maintain certified operators to operate the facilities.

2. 40 C.F.R. § 141.719(b)(3) and Miss. Admin. Code § 15-20-72.1.7.1 require that a PWS must conduct direct integrity testing of membrane units to demonstrate removal efficiencies.

   During the February 2020 Inspection and upon review of the City's March 2020 MOR, the EPA found that the City was unable to perform direct integrity testing of some membrane units due to wear and breakage of components and compressor, and malfunctioning equipment at the O.B. Curtis WTP. Therefore, the City is in noncompliance with 40 C.F.R. § 141.719(b)(3) and Miss. Code Ann. § 15-20-72.1.7.1.

3. 40 C.F.R. § 141.719(b)(4) and Miss. Admin. Code § 15-20-72.1.7.1 require that a PWS must conduct continuous indirect integrity monitoring on each membrane unit unless the system implements continuous direct integrity testing of membrane units in accordance with the criteria in 40 § C.F.R. 141.719 (b)(3)(i) through (v). If indirect integrity monitoring includes turbidity and if the filtrate turbidity readings are above 0.15 nephelometric units (NTU), the PWS must immediately perform direct integrity testing on the associated membrane unit in accordance with 40 C.F.R. § 141.719(b)(3). Pursuant to 40 C.F.R. § 141.719(b)(3), the direct integrity testing log removal value (LRV) for the membrane units at O.B. Curtis Water Treatment Plant (WTP) must be greater than or equal to the control limit[3] of 4, or else it is considered to have failed the direct integrity testing and the System must remove the membrane unit from service, conduct a direct integrity test to verify any repairs, and may return the membrane unit to service only if the direct integrity test is within the control limit. See 40 C.F.R. § 141.719(b)(3)(v).

   As indicated by a review of the City's MORs, on several days in March 2020, the indirect integrity monitoring of the membrane units at the O.B. Curtis WTP showed turbidity readings greater than 0.15 NTU. Subsequent direct integrity testing performed showed failures of several of the membrane units, due to LRVs lower than the control limit of 4. The City did not remove these membrane units from service, as required by 40 C.F.R. § 141.719(b)(3)(v). Therefore, the City is in noncompliance with 40 C.F.R. §§ 141.719(b)(3)(v) and 141.719(b)(4) and Miss. Code Ann. § 15-20-72.1.7.1.

[3] Under 40 C.F.R. § 141.719(b)(3)(iv), a System must establish a control limit within the sensitivity limits of the direct integrity test that is indicative of an integral membrane unit capable of meeting the removal credit awarded by the State. This control limit is known as the minimum log removal value and is set by the primary enforcement agency for membrane treatment systems (in this matter, MSDH).

4. Pursuant to 40 C.F.R. § 141.132(b)(2) and Miss. Code Ann. § 15-20-72.1.3.6, a PWS using chlorine dioxide for disinfection or oxidation must conduct daily monitoring for chlorite.

   On February 5, 2020, the EPA observed the System treating with chlorine dioxide at the J.H. Fewell WTP. However, the February 2020 MOR stated that the System did not use chlorine dioxide at the J.H. Fewell WTP on February 5, 2020, nor did the report show that the System conducted the required monitoring on that date for chlorite. Therefore, the City is in noncompliance with 40 C.F.R. §§ 141.132(b)(2) and Miss. Code Ann. § 15-20-72.1.3.6.

5. Pursuant to 40 C.F.R. § 141.90(a)(3) and Miss. Code Ann. § 15-20-72.1.5.1, as early as possible prior to the addition of a new source or any long-term change in water treatment, a water system deemed to have optimized corrosion control under 40 C.F.R. § 141.81(b)(3) or a water system subject to reduced monitoring pursuant to 40 C.F.R. § 141.86(d)(4) shall submit written documentation to the State describing the change or addition. Under 40 C.F.R. § 141.90(a)(3), the State must review and approve the addition of a new source or long-term change in treatment before it is implemented by the PWS.

   In 2014, the City had been deemed to have both optimized corrosion control and was, at that time, subject to reduced monitoring. In or around October 2014, the City merged the ground water system and the surface water systems under the PWS ID No. MS0250008, thereby replacing the groundwater system area with surface water from the O.B. Curtis WTP and turning the ground water wells into an emergency supply source. According to the City, this was intended to be a long-term change. In or around July 2015, due to water treatment plant and distribution issues, the City turned the wells back on and began using ground water for those areas served by surface water after the merger. The City returned the System to its pre-October 2014 operational configuration, as follows: (1) ground water system service area was again fully served by ground water only; (2) this service area was no longer served by surface water; and (3) the ground water service area was again using gaseous chlorine for disinfection. However, the System remained merged under the PWS ID No. MS0250008 and was not identified as two separate public water systems, despite the System no longer operationally considering the ground water wells as an emergency source. In October 2014, the City did not provide a formal request to MSDH to change its source from groundwater to surface water; nor did it notify MSDH in 2015, when the change from surface water back to groundwater occurred. Therefore, the City is in noncompliance with 40 C.F.R. §§ 141.90(a)(3) and 141.81(b)(3) and Miss. Code Ann. § 15-20-72.1.5.1.

6. Pursuant to 40 C.F.R. § 141.80(c) and Miss. Code Ann. § 15-20-72.1.3.2, the lead action level is exceeded if the concentration of lead in more than 10% of tap water samples collected during any monitoring period conducted in accordance with 40 C.F.R. § 141.86 is greater than 0.015 mg/L, (i.e., if the "90th percentile" lead level is greater than 0.015 milligrams per liter (mg/L) (or 15 parts per billion (ppb))). Under 40 C.F.R. § 141.80(e), any PWS exceeding the lead action level shall implement all applicable source water treatment requirements specified by the State under 40 C.F.R. § 141.83. Pursuant to 40 C.F.R. § 141.83, any PWS exceeding the lead action level must complete source water monitoring and make treatment recommendations to the State within 180 days after the end of the monitoring period during which the lead action level was exceeded. The State then makes a determination regarding source water treatment, and, if necessary, the State may require the PWS to install and operate such treatment.

The System exceeded the lead action level of 0.015 mg/L for the following monitoring periods: January – June 2015; January – June 2016; and July – December 2016. On February 12, 2016, MSDH issued a compliance plan to the City to address the lead action level exceedances (ALEs). As a result of the June 2015 lead ALE, the City conducted an optimal corrosion control treatment (OCCT) study between October 2016 and April 2017 and provided the recommended treatment to MSDH on June 13, 2017. MSDH concurred with the recommended treatment and provided a deadline of May 31, 2019 to complete source water treatment installation. Although MSDH later extended the completion date to December 2019, this deadline remains unmet and the City has failed to install OCCT at the J.H. Fewell WTP. Therefore, the City is in noncompliance with 40 C.F.R. §§ 141.80(e) and 141.83 and Miss. Code Ann. § 15-20-72.1.3.2, for failure to install OCCT and provide applicable source water treatment.

7. Pursuant to 40 C.F.R. § 141.82(g) and Miss. Code Ann. § 15-20-72.1.4.3, all systems optimizing corrosion control shall continue to operate and maintain OCCT, including maintaining water quality parameters (WQPs) at or above minimum values or within ranges designated by the State under 40 C.F.R. § 141.82(f). A water system is out of compliance with the requirements of 40 C.F.R. § 141.82(g) for a six-month period if it has excursions for any State-specified WQP on more than nine days during the period. An excursion occurs whenever the daily value for one or more of the WQPs measured at a sampling location is below the minimum value or outside the range designated by the State. Additionally, PWSs must provide the public notice of treatment technique requirement violations (such as WQP excursions) within 30 days of learning of the violation, pursuant to 40 C.F.R. § 141.203 and Miss. Code Ann. § 15-20-72.1.5.2.

   The City failed to comply with the lead and copper rule (LCR) treatment technique requirements for pH and/or alkalinity WQPs for the following monitoring periods:

   - January – June 2016 (186 days of excursions of WQPs);
   - July – December 2016 (221 days of excursions of WQPs);
   - January – June 2017(200 days of excursions of WQPs);
   - July – December 2017(258 days of excursions of WQPs);
   - January – June 2018 (91 days of excursions of WQPs);
   - July – December 2018 (166 days of excursions of WQPs);
   - January – June 2019 (211 days of excursions of WQPs);
   - July – December 2019 (113 days of excursions of WQPs); and
   - January – June 2020 (62 days of excursions of WQPs – Note: this is based on data through April 2020).

   The City failed to report the WQP violations to SDWIS and did not provide public notification for the following monitoring periods: July – December 2016; January – June 2017; and July – December 2017. Therefore, the City is in noncompliance with 40 C.F.R. §§ 141.82(g) and 141.203 and Miss. Code Ann. §§ 15-20-72.1.4.3 and 72.1.5.2 for failure to maintain optimal WQPs and provide the appropriate public notification.

8. Pursuant to 40 C.F.R. § 141.723(d) and Miss. Admin. Code § 15-20-72.1.4.1, a PWS must correct any significant deficiencies identified in an EPA- or State-conducted sanitary survey in accordance with EPA- or State-approved schedules.

On November 18, 2016, MSDH conducted a sanitary survey, during which MSDH made a finding of inadequate application of treatment chemicals and techniques. Thereafter, MSDH issued a significant deficiency report on May 12, 2017 citing the System for failure to achieve the target hardness and alkalinity goals [i.e. WQPs], and thereafter issued a compliance plan to the System, requiring improvements to the System be completed by December 29, 2019 to bring the System into compliance. The System failed to complete the required compliance measures by the December 29, 2019 deadline established by the State. Therefore, the City is in noncompliance with 40 C.F.R. § 141.723(d) and Miss. Admin. Code § 15-20-72.1.4.1.

9. Pursuant to 40 C.F.R. §§ 141.80(f) and 141.84(a) and Miss. Code Ann. § 15-20-72.1.3.2, a water system that fails to meet the lead action level in tap samples taken pursuant to 40 C.F.R. § 141.86(d)(2), after installing corrosion control and/or source water treatment (whichever sampling occurs later), shall replace lead service lines in accordance with the requirements of 40 C.F.R. § 141.84 and Miss. Code Ann. § 15-20-72.1.1.6(8).

   Pursuant to 40 C.F.R. § 141.84(b), a water system shall replace annually at least seven percent (7%) of the initial number of lead service lines in its distribution system. The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins. The system shall identify the initial number of lead service lines in its distribution system, including an identification of the portion(s) owned by the system, based on a materials evaluation, including the evaluation required under § 141.86(a) and legal authorities (e.g., contracts, local ordinances) regarding the portion owned by the system. The first year of lead service line replacement shall begin on the first day following the end of the monitoring period in which the action level was exceeded.

   As detailed under Item No. 6 above, the City was required to commence its lead service line replacement program in June 2016. Despite exceeding the lead action level on several occasions, the City has failed to implement a lead service line replacement program at any time from June 2016 to the present. Therefore, the City is in noncompliance with 40 C.F.R. §§ 141.80(f) and 141.84 and Miss. Code Ann. § 15-20-72.1.1.6(8).

10. Pursuant to 40 C.F.R. § 141.86(a)(1) and Miss. Code Ann. § 15-20-72.1.3.2, each water system shall complete a materials evaluation of its distribution system in order to identify a pool of targeted sampling sites that meets the requirements of this section, and which is sufficiently large to ensure that the water system can collect the number of lead and copper tap samples required in 40 C.F.R. § 141.86(c).

    The EPA requested in its November 2019 Information Request that the City provide its materials evaluation required under 40 C.F.R. § 141.86(a)(1) and Miss. Code Ann. § 15-20-72.1.3.2. Additionally, during the February 2020 inspection, EPA questioned the City about a materials evaluation and what information was used to make sampling site selections. The City has not provided a complete materials evaluation, utilizing the information specified in 40 C.F.R. § 141.86(a)(2), to identify potential lead service lines, which was required when the LCR was promulgated in 1991. Therefore, the City is in noncompliance with 40 C.F.R. § 141.86(a)(1) and Miss. Code Ann. § 15-20-72.1.3.2.

11. Pursuant to 40 C.F.R. § 141.86(b)(2) and Miss. Code Ann. § 15-20-72.1.3.2, each first-draw tap sample for lead and copper shall be one liter in volume and have stood motionless in the plumbing system of each sampling site for at least six hours.

Based upon a review of the City's records conducted during the EPA's February 2020 Inspection, the EPA found that information on the System's customer sampling procedure forms showed that either the samples failed to sit motionless for at least six hours and/or did not have enough information provided for the determination to be made. Therefore, the City is in noncompliance with 40 C.F.R. § 141.86(b)(2) and Miss. Code Ann. § 15-20-72.1.3.2.

12. Pursuant to 40 C.F.R. § 141.86(c) and Miss. Code Ann. § 15-20-72.1.3.2, the City is required to collect 100 unique tap samples every six months.

    The City collected duplicate tap samples from the same site in the same compliance period and used those samples to meet the required minimum number of samples. This was observed in the monitoring data collected by the City and submitted to MSDH in October 2017, October 2018, April 2019, and October 2019. Therefore, the City is in noncompliance with 40 C.F.R. § 141.86(c) and Miss. Code Ann. § 15-20-72.1.3.2.

13. 40 C.F.R. § 141.86 and Miss. Code Ann. § 15-20-72.1.3.2 require all sample results to be from sites or locations listed on the approved lead and copper sampling plan. 40 C.F.R. § 141.86(b)(4) requires that each first draw tap sample be collected from the same sampling site from which the system collected previous samples, unless the system cannot gain entry to collect a follow-up tap sample; under such circumstances, the system may collect a follow-up tap sample from another sampling site in its sampling pool as long as the new site meets the same criteria outlined in 40 C.F.R. § 141.86(a)(3) through (7) and is within reasonable proximity of the original site.

    40 C.F.R. § 141.90(a)(1)(i) and Miss. Code Ann. § 15-20-72.1.5.1 require the City to report the results of all tap samples, including the location of each sampling site and the criteria under 40C.F.R. § 141.86(a)(3) through (7) under which the site was selected, to the State.

    In monitoring data collected by the City and submitted to MSDH in May 2017, October 2017, April 2018, October 2018, April 2019, and October 2019, the City provided sample results from sites or locations not listed on the approved lead and copper sampling plan and/or those sites or locations could not be identified from the information included on the form. Therefore, the City is in noncompliance with 40 C.F.R. § 141.86 and Miss. Code Ann. § 15-20-72.1.3.2.

    Additionally, the City changed sample sites from monitoring period to monitoring period with no documentation of MSDH's approval of such changes or how the new sampling sites met the selection criteria in 40 C.F.R. § 141.86(a)(3) through (7). Therefore, the City is in noncompliance with 40 C.F.R. §§ 141.86(b)(4) and 141.90(a)(1)(i) and Miss. Code Ann. §§ 15-20-72.1.3.2 and 72.1.5.1.

14. Pursuant to 40 C.F.R. § 141.90(a) and Miss. Code Ann. § 15-20-72.1.5.1(1), a PWS is required to analyze and report to the State the information obtained for all water samples taken pursuant to the lead and copper sampling requirements of 40 C.F.R. § 141.86. Pursuant to Miss. Code Ann. § 15-20-72.1.5.5(2), each supplier of water must utilize the services of certified laboratory or party approved by the State where applicable to complete all water quality analyses as stipulated in the NPDWRs.

    During the April 2019 compliance monitoring period, some lead and copper samples collected by the City were not taken to a certified laboratory or party approved by the State for analysis. Additionally, while the City retained sample collection forms for sites 12 and 181, no

corresponding laboratory results were reported to the State for these sites. Therefore, the City is in noncompliance with 40 C.F.R. § 141.90(a) and Miss. Code Ann. §§ 15-20-72.1.5.1(1) and -72.1.5.5(2).

15. Pursuant to 40 C.F.R. § 141.85(d) and Miss. Code Ann. § 15-20-72.1.5.2, all water systems must deliver a consumer notice of all individual lead tap water monitoring results to persons served by the water system at sites that are tested. A water system that exceeds the lead action level shall deliver the public education materials contained in 40 C.F.R. § 141.85(a) in accordance with 40 C.F.R. § 141.85(b). A water system must provide the consumer notice as soon as practical, but no later than 30 days after the system learns of the tap monitoring results.

    For the first half of 2016, City provided notification to MSDH by certification that consumer notices were distributed in February 2016. However, the last sample result for February was not analyzed until March 2016 and was not included in the consumer notice for that period. Therefore, the consumer notices that went out in February 2016 were incomplete. Therefore, the City is in noncompliance with 40 C.F.R. §§ 141.85(a) and 141.85(d) and Miss. Code Ann. § 15-20-72.1.5.2.

16. Under 40 C.F.R. § 141.90(f)(3) and Miss. Code Ann. § 15-20-72.1.5.1, no later than three months following the end of each monitoring period, each system shall mail a sample copy of the consumer notification of tap results to the State along with a certification that the notification has been distributed in a manner consistent with the requirements of 40 C.F.R. § 141.85(d).

    Based on a review of records obtained during the EPA's February 2020 Inspection, the City failed to provide MSDH with the consumer notice certification forms required by 40 C.F.R. § 141.90(f)(3) for the second half of 2017 and the second half of 2018. Therefore, the City is in noncompliance with 40 C.F.R. § 141.90(f)(3) and Miss. Code Ann. § 15-20-72.1.5.1.

17. Pursuant to 40 C.F.R. § 141.85(d) and Miss. Code Ann. § 15-20-72.1.5.2, all water systems must provide a notice of the individual tap results from lead tap water monitoring carried out under 40 C.F.R. § 141.86 to the persons served by the water system at the specific sampling site from which the sample was taken.

    Customer complaints on the "Homeowner Lead/Copper Sample Collection" forms from tap sampling conducted in October 2018 indicate that several customers were not notified of the lead and copper sampling results. Therefore, the City is in noncompliance with 40 C.F.R. § 141.85(d) and Miss. Code Ann. § 15-20-72.1.5.2.

18. Pursuant to 40 C.F.R. § 141.153 and Miss. Code Ann. § 15-20-72.1.18.1, each PWS must provide to its customers an annual report (known as a "Consumer Confidence Report") which contains the informed identified in 40 C.F.R. §§ 141.153 and 141.154. Under 40 C.F.R. § 141.153(d)(4)(vi), a Consumer Confidence Report must include the 90th percentile value of the most recent round of sampling and number of sampling sites exceeding the ALE.

    The City did not fully provide lead and copper results for the 2016 and 2018 monitoring periods in its Consumer Confidence Reports for those years. Therefore, the City is in noncompliance with 40 C.F.R. §141.153(d)(4)(vi) and Miss. Code Ann. § 15-20-72.1.18.1.

Consistent with Section 1414(a)(1)(A) of the SDWA, 42 U.S.C § 300g-3(a)(1)(A), the EPA is hereby notifying the City of such noncompliance. This Notice shall not be construed as a final agency action subject to judicial review under Section 1414(g) of the SDWA, 42 U.S.C. § 300g-3(g).

Therefore, within ten (10) calendar days of receipt of this Notice of Noncompliance, the City must contact this office to arrange a meeting to show cause why the EPA should not initiate legal proceedings against the City for these violations. In lieu of appearing in the EPA's offices for this meeting, a telephone conference may be scheduled. The City should be prepared to provide all relevant information with documentation pertaining to the above violations. The EPA's legal counsel may also be present at this meeting. Accordingly, the City has the right to have its legal counsel present.

To arrange the particulars of this meeting or to arrange for a telephone conference, please contact Amanda Driskell at (404) 562-9735 or Driskell.Amanda@epa.gov. If the City fails to attend the scheduled meeting/telephone conference or to contact Ms. Driskell prior to the meeting/conference date, the EPA may proceed with formal enforcement against the City without further notice.

The City may, if it so desires, assert a confidential business information (CBI) claim covering any or all information furnished to the EPA during our meeting. Every CBI claim must be made in a manner described in 40 C.F.R. § 2.203 and must be fully substantiated with documentary evidence which shows how the claim meets every criterion listed in 40 C.F.R. §§ 2.208 and 2.304. If no CBI claim accompanies the City's information when it is received by the EPA, it may be made available to the public by the EPA without further notice to the City. Further details, including how to make a business confidentiality claim, are included in Enclosure B.

If you have any questions regarding this matter, please contact Ms. Driskell at the phone number or email listed above. For legal inquiries, please have your attorneys contact Suzanne K. Armor, Associate Regional Counsel, at (404) 562-9701 or Armor.Suzanne@epa.gov.

Sincerely,

CAROL KEMKER

Digitally signed by CAROL KEMKER
Date: 2020.05.11 17:49:07 -04'00'

Carol L. Kemker
Director
Enforcement and Compliance Assurance Division

Enclosures

cc: Robert K Miller, Director
City of Jackson Department of Public Works

Lester Herrington, Director
Office of Environmental Health, MSDH

ENCLOSURE A

City of Jackson SDWA Section 1431, 42 U.S.C. § 300g-2

ENCLOSURE B

RIGHT TO ASSERT BUSINESS CONFIDENTIALITY CLAIMS

(40 C.F.R. Part 2)

Except for information which deals with the existence, absence, or level of contaminants in drinking water, you may, if you desire, assert a business confidentiality claim as to any or all of the information that the EPA is requesting from you. Applicable EPA regulations relating to business confidentiality claims are at 40 C.F.R. Part 2 and 40 CFR § 2.304(e).

If you assert such a claim for the requested information, the EPA will only disclose the information to the extent and under the procedures set out in the cited regulations. If no business confidentiality claim accompanies the information, the EPA may make the information available to the public without any further notice to you.

40 C.F.R. § 2.203(b). **Method and time of asserting business confidentiality claim.** A business which is submitting information to the EPA may assert a business confidentiality claim covering the information by placing on (or attaching to) the information, at the time it is submitted to the EPA, a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as "trade secret," "proprietary," or "company confidential." Allegedly confidential portions of otherwise non-confidential documents should be clearly identified by the business and may be submitted separately to facilitate identification and handling by the EPA. If the business desires confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state.

Mailing Addresses for the CCs:
Mr. Robert K. Miller, Director
City of Jackson Department of Public Works
200 South President Street
Jackson, Mississippi 39205-0017

Lester Herrington, MSDH
Bureau of Public Water Supply
P.O. Box 1700
2423 North State Street
Jackson, MS 39215-1700

Exhibit 6:
Notice of Noncompliance
Effective April 27, 2021

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET ATLANTA, GEORGIA 30303-8960

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

The Honorable Chokwe A. Lumumba
Mayor of City of Jackson
219 South President Street
Jackson, Mississippi 39205

RE: Notice of Noncompliance Pursuant to Section 1414(a)(1)(A) of the Safe Drinking Water Act, 42 U.S.C. § 300g-3(a)(1)(A), City of Jackson Public Water System, Jackson, Mississippi, PWS ID No. MS0250008

Dear Mayor Lumumba:

The U.S. Environmental Protection Agency is responsible for assuring public water systems provide safe drinking water in accordance with the Safe Drinking Water Act (SDWA), 42 U.S.C. § 300f et. seq., and the regulations promulgated thereunder. Based on information contained in the Safe Drinking Water Information System (SDWIS), the City of Jackson Public Water System (System) has approximately 71,486 service connections, serves approximately 173,514 persons, and is owned and/or operated by the City of Jackson, Mississippi (hereinafter, the City). Pursuant to Section 1401(15) of the SDWA, 42 U.S.C. § 300f(15), it is therefore a community water system. As a community water system, the Jackson Public Water System (PWS) is subject to the requirements of the National Primary Drinking Water Regulations (NPDWR), 40 C.F.R. Part 141, and the Mississippi Primary Drinking Water Regulations (MPDWR), promulgated pursuant to the Mississippi Safe Drinking Water Act of 1997, Miss. Code Ann. § 46-21-1 et. seq.

Based on information contained in a public notice issued by the City to its consumers on March 31, 2021, as required under 40 C.F.R. § 141.629, the EPA finds that the System is in noncompliance with the SDWA, the NPDWR, and the MPDWR, as described below:[1]

[1] The violations contained herein are in addition to those violations alleged in the Emergency Administrative Order, Docket No. SDWA-04-2020-2300, issued by the EPA to the City on March 27, 2020, and in the Notice of Noncompliance issued by the EPA to the City on May 11, 2020.

- Pursuant to 40 C.F.R. § 141.64(b)(2) and Miss. Admin. Code 15-20-72.1.2.6, the maximum contaminant level (MCL) for total haloacetic acids (HAA5) is 60 micrograms per liter (µg/L), determined as a locational running annual average[2] at each monitoring location. Systems must include the highest locational running annual average for HAA5 and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. If more than one location exceeds the HAA5 MCL, the System must include the locational running annual averages for all locations that exceed the MCL. The City's testing results from 4th Quarter 2020 and 1st Quarter 2021 show that the System exceeded the HAA5 MCL during those periods. The level of HAA5 averaged at one of the System's locations for 4th Quarter 2020 was 66 µg/L, and for 1st Quarter 2021 was 65 µg/L.

- As noted in the EPA's previously-issued May 11, 2020, notice of noncompliance, the System exceeded the lead action level of 0.015 mg/L for the following monitoring periods: January – June 2015; January – June 2016; and July – December 2016. On February 12, 2016, the Mississippi State Department of Health (MSDH)[3] issued a compliance plan to the City to address the lead action level exceedances (ALEs). As a result of the June 2015 lead ALE, the City conducted an optimal corrosion control treatment (OCCT) study between October 2016 and April 2017 and provided the recommended treatment to MSDH on June 13, 2017. MSDH concurred with the recommended treatment and provided a deadline of May 31, 2019 to complete source water treatment installation. Although MSDH later extended the completion date to December 2019, this deadline has remained unmet throughout 2020 and into 2021, and the City has failed to install OCCT at the J.H. Fewell WTP as of the date of this Notice. Therefore, the City is in noncompliance with 40 C.F.R. §§ 141.80(e) and 141.83 and Miss. Code Ann. § 15-20-72.1.3.2, for failure to install OCCT and provide applicable source water treatment.

Consistent with Section 1414(a)(1)(A) of the SDWA, 42 U.S.C § 300g-3(a)(1)(A), the EPA is hereby notifying the City of such noncompliance, and the EPA remains committed to working with and providing technical assistance to the City, as appropriate, in order to bring the System into compliance. This Notice shall not be construed as a final agency action subject to judicial review under Section 1414(g) of the SDWA, 42 U.S.C. § 300g-3(g).

Therefore, within ten (10) calendar days of receipt of this Notice of Noncompliance, the City must contact this office to arrange a meeting to show cause why the EPA should not initiate legal proceedings against the City for these violations. In lieu of appearing in the EPA's offices for this meeting, a telephone conference may be scheduled. The City should be prepared to provide all relevant information with documentation pertaining to the above violations. The EPA's legal counsel may also be present at this meeting. Accordingly, the City has the right to have its legal counsel present.

To arrange the particulars of this meeting or to arrange for a telephone conference, please contact Amanda Driskell at (404) 562-9735 or driskell.amanda@epa.gov or Bryan Myers at 404-562-9603 or myers.bryan@epa.gov. If the City fails to attend the scheduled meeting/telephone conference or to

[2] The locational running annual average is the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. 40 C.F.R. § 141.2.
[3] The MSDH is the entity in the State of Mississippi with primary enforcement authority over the SDWA, pursuant to SDWA Section 1413, 42 U.S.C. § 300g-2.

contact Ms. Driskell or Mr. Myers prior to the meeting/conference date, the EPA may proceed with formal enforcement against the City without further notice.

As the EPA has previously informed the City, the City may, if it so desires, assert a confidential business information (CBI) claim covering any or all information furnished to the EPA in response to this letter. Further details on how to make a business confidentiality claim are included in Enclosure A.

If you have any questions regarding this matter, please contact Ms. Driskell or Mr. Myers at the phone numbers or emails listed above. For legal inquiries, please have your attorneys contact Suzanne K. Armor, Associate Regional Counsel, at (404) 562-9701 or armor.suzanne@epa.gov.

Sincerely,

CAROL KEMKER Digitally signed by CAROL KEMKER
Date: 2021.04.27 18:00:06 -04'00'

Carol L. Kemker
Director
Enforcement and Compliance Assurance Division

Enclosure

cc: Dr. Charles Williams, City of Jackson Department of Public Works
Lester Herrington, Office of Environmental Health, MSDH

ENCLOSURE A

RIGHT TO ASSERT BUSINESS CONFIDENTIALITY CLAIMS
(40 C.F.R. Part 2)

Except for information which deals with the existence, absence, or level of contaminants in drinking water, you may, if you desire, assert a business confidentiality claim as to any or all of the information that the EPA is requesting from you. Applicable EPA regulations relating to business confidentiality claims are at 40 C.F.R. Part 2 and 40 CFR § 2.304(e).

If you assert such a claim for the requested information, the EPA will only disclose the information to the extent and under the procedures set out in the cited regulations. If no business confidentiality claim accompanies the information, the EPA may make the information available to the public without any further notice to you.

40 C.F.R. § 2.203(b). **Method and time of asserting business confidentiality claim.** A business which is submitting information to the EPA may assert a business confidentiality claim covering the information by placing on (or attaching to) the information, at the time it is submitted to the EPA, a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as "trade secret," "proprietary," or "company confidential." Allegedly confidential portions of otherwise non-confidential documents should be clearly identified by the business and may be submitted separately to facilitate identification and handling by the EPA. If the business desires confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state.

Exhibit 7:
Notice of Noncompliance
Effective January 25, 2022

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

The Honorable Chokwe A. Lumumba
Mayor of City of Jackson
219 South President Street
Jackson, Mississippi 39205

Re: Notice of Noncompliance Pursuant to Section 1414(a)(1)(A) of the Safe Drinking Water Act, 42 U.S.C. § 300g-3(a)(1)(A), City of Jackson Public Water System, Jackson, Mississippi, PWS ID No. MS0250008

Dear Mayor Lumumba:

The U.S. Environmental Protection Agency is responsible for assuring public water systems provide safe drinking water in accordance with the Safe Drinking Water Act (SDWA), 42 U.S.C. § 300f et. seq., and the regulations promulgated thereunder. Based on information contained in the Safe Drinking Water Information System, the City of Jackson Public Water System (System) has approximately 71,486 service connections, serves approximately 173,514 persons, and is owned and/or operated by the City of Jackson, Mississippi (hereinafter, the City). Pursuant to Section 1401(15) of the SDWA, 42 U.S.C. § 300f(15), it is therefore a community water system. As a community water system, the Jackson Public Water System (PWS) is subject to the requirements of the National Primary Drinking Water Regulations, 40 C.F.R. Part 141, and the Mississippi Primary Drinking Water Regulations, promulgated pursuant to the Mississippi Safe Drinking Water Act of 1997, Miss. Code Ann. § 46-21-1 et. seq.

Based on information provided to the EPA by the Mississippi Department of Health (MSDH)[1] and the City of Jackson, the EPA finds that the System is in noncompliance with the SDWA, the National Primary Drinking Water Regulations, and the Mississippi Primary Drinking Water Regulations, as described below:[2]

- Pursuant to Miss. Admin. Code 15-20-72.1.1.6(11), a PWS shall be operated in accordance with the *Public Water System Operations Manual* (*Manual*) published by MSDH. As a PWS, legally responsible official(s) must ensure that those minimal operation standards are performed by the certified waterworks operator and applicable public water supply staff for the safety and welfare

[1] The MSDH is the entity in the State of Mississippi with primary enforcement authority over the SDWA, pursuant to SDWA Section 1413, 42 U.S.C. § 300g-2.
[2] The violations contained herein are in addition to those violations alleged in the Emergency Administrative Order, Docket No. SDWA-04-2020-2300, issued by the EPA to the City on March 27, 2020; in the Notice of Noncompliance issued by the EPA to the City on May 11, 2020; and in the Notice of Noncompliance issued by the EPA to the City on April 27, 2021.

of the public water supply's facilities and customer. The *Manual* recommends that a PWS maintain an adequate inventory of supplies, chemicals and equipment to properly operate the System.

Pursuant to Miss. Admin. Code 15-20-72.1.4.1, a PWS shall, upon receipt of the sanitary survey report, provide a written response to all significant deficiencies identified in the report to the MSDH within 45 days of receipt of the report. In this written response, the PWS shall outline its plan to correct the significant deficiencies identified in the survey report.

A fire at the electrical panel at the O.B. Curtis Water Treatment Plant (WTP) on April 30, 2021 caused all five of the high-service pumps at the O.B. Curtis WTP to be unavailable for service. During a November 8, 2021 inspection of the PWS by MSDH, the pumps remained out of service, with no target date by the City to put the pumps back into service. The loss of the pumps has caused multiple elevated tanks to be low or empty and has caused certain areas of the distribution system to have sustained low pressure.

Low-pressure and loss of pressure in a drinking water distribution system may cause a net movement of water from outside the pipe to the inside through cracks, breaks, or joints in the distribution system that are common in all water systems. Backsiphonage occurs when pressure is lost in pipes, creating a negative pressure and a partial vacuum, which pulls water from a contaminated source outside the pipe into the treated, potable water inside the pipe. This creates a suitable environment for bacteriological contamination and other disease-causing organisms, including *E. coli*, to enter the water distribution system downstream of the WTPs, which then is delivered to users.

MSDH issued the City a significant deficiency report on December 14, 2021, identifying this as a significant deficiency, and requiring the City to provide MSDH with a written response identifying corrective actions and timeframes by January 14, 2022. MSDH's report requires that the City's corrective actions be complete within 120 days of receipt of the report, or no later than April 14, 2022. (See Enclosure A).

As of the date of this Notice, the City has not repaired or replaced the electrical panel to restore the pumps to service, nor has the City provided MSDH and/or the EPA with a corrective action plan to correct the significant deficiency by the deadline of April 14, 2022.

Consistent with Section 1414(a)(1)(A) of the SDWA, 42 U.S.C § 300g-3(a)(1)(A), the EPA is hereby notifying the City of such noncompliance, and the EPA remains committed to working with and providing technical assistance to the City, as appropriate, in order to bring the System into compliance. This Notice shall not be construed as a final agency action subject to judicial review under Section 1414(g) of the SDWA, 42 U.S.C. § 300g-3(g).

Therefore, within 10 calendar days of receipt of this Notice of Noncompliance, the City must contact this office to arrange a meeting to show cause why the EPA should not initiate legal proceedings against the City for these violations. In lieu of appearing in the EPA's offices for this meeting, a telephone conference may be scheduled. The City should be prepared to provide all relevant information with documentation pertaining to the above violations. The EPA's legal counsel may also be present at this meeting. Accordingly, the City has the right to have its legal counsel present.

To arrange the particulars of this meeting or to arrange for a telephone conference, please contact Mr. Bryan Myers at (404) 562-9603 or Myers.Bryan@epa.gov. If the City fails to attend the scheduled meeting/telephone conference or to contact Mr. Myers prior to the meeting/conference date, the EPA may proceed with formal enforcement against the City without further notice.

As the EPA has previously informed the City, the City may, if it so desires, assert a confidential business information claim covering any or all information furnished to the EPA in response to this letter. Further details on how to make a business confidentiality claim are included in Enclosure B.

If you have any questions regarding this matter, please contact Mr. Myers at the phone number or email listed above. For legal inquiries, please have your attorneys contact Suzanne K. Armor, Associate Regional Counsel, at (404) 562-9701 or Armor.Suzanne@epa.gov.

Sincerely,

CAROL KEMKER

Digitally signed by CAROL KEMKER
Date: 2022.01.25 15:23:56 -05'00'

Carol L. Kemker
Director
Enforcement and Compliance Assurance Division

Enclosures

cc: Dr. Charles Williams, Director
City of Jackson Department of Public Works

Lester Herrington, Director
Office of Environmental Health, MSDH

ENCLOSURE A

MSDH Significant Deficiency Report (Dec. 14, 2021)

ENCLOSURE B

RIGHT TO ASSERT BUSINESS CONFIDENTIALITY CLAIMS

(40 C.F.R. Part 2)

Except for information which deals with the existence, absence, or level of contaminants in drinking water, you may, if you desire, assert a business confidentiality claim as to any or all of the information that the EPA is requesting from you. Applicable EPA regulations relating to business confidentiality claims are at 40 C.F.R. Part 2 and 40 CFR § 2.304(e).

If you assert such a claim for the requested information, the EPA will only disclose the information to the extent and under the procedures set out in the cited regulations. If no business confidentiality claim accompanies the information, the EPA may make the information available to the public without any further notice to you.

40 C.F.R. § 2.203(b). **Method and time of asserting business confidentiality claim.** A business which is submitting information to the EPA may assert a business confidentiality claim covering the information by placing on (or attaching to) the information, at the time it is submitted to the EPA, a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as "trade secret," "proprietary," or "company confidential." Allegedly confidential portions of otherwise non-confidential documents should be clearly identified by the business and may be submitted separately to facilitate identification and handling by the EPA. If the business desires confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state.